AL 12-001-0170



# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

July 10, 2012

The Honorable Gina McCarthy
Assistant Administrator for the Office of Air and Radiation
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Assistant Administrator McCarthy:

Thank you for appearing before the Committee on Environment and Public Works on June 19, 2012, at the hearing entitled, "Review of Recent Environmental Protection Agency's Air Standards for Hydraulically Fractured Natural Gas Wells and Oil and Natural Gas Storage." We appreciate your testimony and we know that your input will prove valuable as we continue our work on this important topic.

Enclosed are questions for you that have been submitted by Senator Inhofe for the hearing record. Please submit your answers to these questions by COB July 24, 2012, to the attention of Mara Stark-Alcalá, Senate Committee on Environment and Public Works, 410 Dirksen Senate Office Building, Washington, DC 20510. In addition, please provide the Committee with a copy of your answers via electronic mail to Mara_Stark-Alcala@epw.senate.gov. To facilitate the publication of the record, please reproduce the questions with your responses.

Again, thank you for your assistance. Please contact Grant Cope of the Majority Staff at (202) 224-8832, or Todd Johnston of the Minority Staff at (202) 224-6176 with any questions you may have. We look forward to reviewing your answers.

Sincerely,

Barbara Boxer
Chairman

James M. Inhofe
Ranking Member

**Environment and Public Works Committee Hearing**
**June 19, 2012**
**Follow-Up Questions for Written Submission**

Questions for McCarthy

Questions from:

Senator James Inhofe

**New Source Review Aggregation**

1. In September 2009, you withdrew (without notice and comment rulemaking) the previous Administration's determination that oil and gas fields do not need to be aggregated for purposes of New Source Review permitting. You replaced the previous law and policy that provided certainty to oil and gas development with a case-by-case subjective analysis, which has created uncertainty, lawsuits, and challenges to oil and gas permits throughout the United States. What led the Agency to determining the previous law or policy was incorrect? Was there any concern at the Agency that replacing the previous law or policy with a case-by-case subjective analysis would lead to substantial uncertainty in the development of oil and gas resources?

2. I understand that there is an on-going pilot program in EPA Region 8 that resulted from an appeal of a permit issued pursuant to the case-by-case subjective policy that you placed into effect. The pilot program requires the oil and gas industry to provide a vast amount of information in its permit applications that were never before required to demonstrate why oil and gas fields to should not be treated as a traditional industrial facility. Why and under what authority did EPA require such an increase burden on the oil and gas industry? What affects would EPA estimate this new level of documentation would have on future litigation, paperwork, and regulatory certainty to oil and gas developers?

3. Does EPA intend for New Source Review permitting to be applicable to oil and gas fields? How could an oil and gas field be permitting under the NSR pre-construction permitting program when the expansion and development of an oil and field evolves over time and is not a traditional industrial source?

**NSPS**

4. Emissions at well-sites have never been regulated under NSPS because well pad emissions are extremely low. How does EPA justify regulating the oil and gas industry given that emissions from these sites are well below any threshold of concern?

5. Other Clean Air Act programs, such as minor source permitting programs that are implemented by the States, were already regulating the low emitting sources in the oil and gas industry. Why did EPA find it necessary to regulate these low emitting sources when the States were already doing so under the Clean Air Act?

**Subpart W**

6. In the 2008 Consolidated Appropriations Act, Congress directed EPA to inventory of greenhouse gas (GHG) emissions above "appropriate thresholds." Subpart W is the section of the resultant EPA rule targeting onshore oil and natural gas production. In theory, only a facility

that meets the threshold of 25,000 tons/year would be required by the rule to purchase and install monitoring equipment and report GHG emission levels to EPA. However, even though most individual wells would never come close to meeting the GHG thresholds, EPA's sweeping definition of a single "facility" will require operators to install costly equipment on every well. This is because in its novel definition, EPA defines a "facility" as a bundling of all petroleum or natural gas equipment on a well pad or associated with a well pad in a single *hydrocarbon basin*. Significantly, some of these hydrocarbon basins are so large that under this expansive approach all wells under common ownership along the Gulf Coast of Texas and Louisiana and are treated as *one facility*. Likewise, all wells under common ownership in State of Pennsylvania would be considered one facility. Why has EPA created this unprecedented definition of "facility"? Why did EPA not use a definition equivalent to the definition of a facility under the Clean Air Act as modified by the intent of Section 112 (n)(4)?

7. Despite the exploration and production industry being such a small contributor to GHG emissions, with the more significant amounts coming from an even smaller subset of wells, EPA has put forth a proposal that would impose costly, confusing compliance burdens on almost all operators. Even of the smallest wells, at the real risk of having them be shut-in, must conduct what was supposed to be one year inventory on whether industry's GHG emissions are closer to 3 or 6 percent. What was EPA's rationale for selecting an this expansive approach burdening all producers as opposed to a more strategic proposal that would target the few sources with the greatest potential to emit GHGs?

8. Inexplicably, EPA has already promulgated NESHAPS and NSPS for the very emissions it purports to inventory. If this rule really needed for EPA to obtain accurate and reliable emissions measures, why did EPA already set NESHAPS and NSPS requirements before obtaining these inventories?

**General**

9. EPA can not regulate technology into existence. Experts have serious concerns that the equipment prescribed to conduct Reduced Emission Completions will simply not be available in time to comply with the final rule schedule. If it takes years to manufacture sufficient specialized equipment and adequately train operators how to safely conduct these operations, how will EPA accommodate these anticipated impracticabilities?

10. How do the EPA's economic analyses take into consideration the vast differences between formations and types of operations? Specifically what did EPA study and consider related to considerations and variations based on: (1) wet v. dry plays; (2) tight formations; (3) wildcat and exploratory wells; (4) depth of the fracturing; (5) directional drilling; and (6) size, type, and complexity of operation. Does EPA include all possible compliance costs and operational variables? When or under what circumstances do completion controls cease to be economically profitable?

11. What was the price of natural gas used by when completing the economic analyses for these rules? Did EPA's economic analysis accommodate for vast swings in spot prices for natural gas? Did EPA review historic figures and analysis? Did EPA make future pricing projections?

12. The Director of Wyoming Department of Environmental Quality, John Corra, explained a very unique phenomenon experienced in the Upper Green River Basin during the winter of 2008. When the problem arose, the state had the immediate flexibility to rapidly study the localized issue, pinpoint the problem, and work with industry to quickly tailor unique solutions and

contingency plans. This agile model is the antithesis of a nationalized, one-size-fits-all approach. What steps is the EPA taking to ensure that the new oil and gas NSPS and future regulations will not interfere with the minor source programs states have in place? How can EPA replicate the speed, accuracy, and efficiency demonstrated by local regulators working in conjunction with industry to find workable solutions to unique problems? What is EPA doing to ensure the local flexibility required to create effective, common-sense regulations?

13. What is the anticipated carbon footprint of compliance with the rules? (Including the life-cycle impact of paper work, man hours, transit, recordkeeping, technology, and other related compliance costs?)

14. EPA has indicated that it expects all future fossil fueled power plants to use natural gas rather than coal. Now EPA has issued a proposal to tighten the PM standards and create non-attainment areas in the very states (PA & OH) where that natural gas is and will be produced. How will we be able to tap that gas, fuel our electricity and create jobs if EPA proceeds with its proposal to create more non-attainment areas?

15. Industry recently released a comprehensive study relying on data from ten times the number of wells as the previous EPA estimate for methane emissions and found that EPA's emissions estimate in some instances were a factor of 2 too high and other studies have found overestimations of closer to 1400%. How long will it take for EPA to update its emissions inventory to reflect the more comprehensive data? How does the more comprehensive industry methane emissions data affect EPA's cost-effectiveness assertions in the oil and gas rule?

16. Methane occurs naturally in ambient air. Atmospheric methane surveys and soil gas sampling can be used to establish baseline methane levels and then detect changes in methane concentration as shale gas well development occurs. DOE's NETL lab is undertaking such a research effort, which will include fugitive emissions in PA. For example, methane from both natural seeps and from pre-existing wells and pipelines is expected to be present at the Washington County site prior to development. What is EPA's role in this effort? What are the opportunities for the broader oil and natural gas industry (not just the single operator) to participate in this study? How is the information being shared with interested stake holders? How will these results be used to re-evaluate the rules?

17. The proposed rule purports to not regulate GHGs, but rather VOCs. However, many natural gas streams produced today contain little or no VOCs. Despite this, EPA calculated cost effectiveness based on natural gas that is 18% by weight VOC. The cost effectiveness (in dollars per ton of VOC reduced) approaches infinity as VOC content approaches zero. How does EPA economically justify its regulations for not just for the average "model" facility, but for reasonably expected variations. Why did EPA ignore this reality and select a one-size-fits-all approach instead of focusing regulations on streams with a minimum VOC content? Do these rules regulate any facilities that emit no VOC's or HAP's at all? If so, how does the Agency justify this?

18. Emissions data was recorded from several NOAA observation towers throughout the country, including two in California, two in Colorado, and one each in Texas, Oklahoma, and Wisconsin. According to the NOAA study, the Wisconsin tower, "in the middle of the Chequamegon National Forest" recorded a higher methane level than the tower in the middle of the Denver-Julesburg Basin. Why would a tower located in a federally protected forest and far removed from any industrial activity record higher methane emissions than measurements taken in a natural gas field?

19. Economic analysis of emission control strategies should be representative of real-world operations, include the full variety of conditions, and consider all of the costs of compliance with the proposed rule. For example, API found the cost effectiveness for tanks to vary from $5,271/ton of VOC to $1,519,667/ton of VOC. The "average model facilities" that EPA has used in the economic analysis do not represent the great variation seen across the U.S. Why did EPA ignore these realities and refuse to narrow the proposed regulations to operations in which the proposed emission control practices can be applied in a cost effective manner?

20. Most producers do not normally track the information EPA requires to be reported for this rule. To begin tracking the GHG emissions required by this rule, America's oil and natural gas producers will be required to purchase costly equipment to affix to their operations merely to inventory GHG emissions. As the rule goes into effect, it is most damaging to America's smaller independents who will have to bear the cost of affixing this inventory equipment to their operations. What specifically is EPA doing to ensure that the rule will be economically feasible for these smaller producers?

21. Ms. McCarthy, in your testimony you stated that ICAC estimated that the implementation of the Clean Air Interstate Rule Phase 1 created jobs in the air pollution control industry. How many jobs were lost (or alternatively, you used the term "shifted") in other sectors?

22. 42 USC 7411(f) requires consultation with State Governors and air pollution control agencies before expanding the listed categories or promulgating new NSPS. Has EPA conducted the required consultations with the States with significant the oil and gas transportation and distribution sectors? Will EPA revise the requirements for reduced emission completions requirements, storage vessels, pneumatic controllers, and compressors in NSPS, Subpart OOOO based on continued consultation?

23. The notifications, monitoring, recordkeeping, testing and reporting requirements for a major source NESHAP regulation are overly burdensome for NSPS Subpart OOOO. Because of the remote, dispersed and unmanned nature of facilities that lack electrical power, make the requirements logistically impractical, technically difficult and uneconomic. Furthermore, the use of NESHAP compliance requirements for storage vessels is confusing and unjustifiably stringent for NSPS. With these considerations in mind, what specific O&G industry appropriate notification, recordkeeping, reporting, and performance testing sections requirements will be included in Subpart OOOO?

24. The equipment necessary to comply with the REC requirements is currently not available and will require time to manufacture. Furthermore, industry will have a shortage of experienced contractors or staff for safely doing "reduced emissions completions." Due to the limited availability of appropriate and safe equipment and experienced and trained personnel to perform REC's, what steps is EPA taking to ensure timely manufacturing of equipment and training of operators without premium costs associated with short time-frames?

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

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OFFICE OF CONGRESSIONAL
AND INTERGOVERNMENTAL RELATIONS

The Honorable Barbara Boxer
Chairman
Committee on Environment and Public Works
United States Senate
Washington, DC 20510

Dear Chairman Boxer:

Thank you for your letter of July 10, 2012, to Gina McCarthy requesting responses to Questions for the Record following the June 19, 2012, hearing before the Committee on Environment and Public Works entitled, "Review of Recent Environmental Protection Agency Air Standards for Hydraulically Fractured Natural Gas Wells and Oil and Natural Gas Storage."

The responses to the questions are provided as an enclosure to this letter. If you have any further questions, please contact me, or your staff may contact Josh Lewis in EPA's Office of Congressional and Intergovernmental Relations at (202) 564-2095.

Sincerely,

Laura Vaught
Deputy Associate Administrator
for Congressional Affairs

Enclosure

cc: The Honorable James M. Inhofe
Ranking Member

Enclosure

Environment and Public Works Committee Hearing
June 19, 2012
Follow-Up Questions for Written Submission

Questions for Gina McCarthy
Questions from: Senator James Inhofe

New Source Review Aggregation

**1. In September 2009, you withdrew (without notice and comment rulemaking) the previous Administration's determination that oil and gas fields do not need to be aggregated for purposes of New Source Review permitting. You replaced the previous law and policy that provided certainty to oil and gas development with a case-by-case subjective analysis, which has created uncertainty, lawsuits, and challenges to oil and gas permits throughout the United States. What led the Agency to determining the previous law or policy was incorrect? Was there any concern at the Agency that replacing the previous law or policy with a case-by-case subjective analysis would lead to substantial uncertainty in the development of oil and gas resources?**

Response:
Source determinations under the New Source Review (NSR) program have always been made on a case-by-case basis, using three regulatory criteria (whether activities are under common control, are contiguous or adjacent, and whether they are part of the same industrial grouping). The January 12, 2007, guidance memorandum "Source Determinations for Oil and Gas Industries" issued by Acting Assistant Administrator William Wehrum (the 2007 memo) was not a "determination that oil and gas fields do not need to be aggregated" and did not mandate application of a particular approach to determining whether oil and gas fields need to be aggregated for purposes of NSR and Title V permitting. Rather, it was a non-binding policy statement that set forth a possible methodology for making source determinations in the oil and gas industry. The 2007 memo attempted to simplify the analysis required by the existing NSR and title V regulations by focusing on only one of the three regulatory criteria for source determinations, looking at proximity to determine whether activities are "contiguous or adjacent." This focus on just one of the three regulatory factors caused confusion. To avoid this confusion, in 2009 the EPA withdrew the 2007 memo and affirmed that all three regulatory criteria still apply, and must be assessed as usual when making a case-by-case determination of whether activities should be aggregated. This is consistent with our existing NSR regulations (40 C.F.R. 52.21), as explained in the 1980 preamble to the promulgation of those regulations (45 FR 52676) and as demonstrated through almost 30 years of historical practice making source determinations across a number of industries, including the oil and gas industry.

**2. I understand that there is an on-going pilot program in EPA Region 8 that resulted from an appeal of a permit issued pursuant to the case-by-case subjective policy that you placed into effect. The pilot program requires the oil and gas industry to provide a vast amount of information in its permit applications that were never before required to demonstrate why oil and gas fields should not be treated as a traditional industrial facility. Why and under what authority did EPA require such an increase burden on the oil and gas industry? What affects would EPA estimate this new level of documentation would have on future litigation, paperwork, and regulatory certainty to oil and gas developers?**

Response:
As discussed in the response to question one above, the EPA has not changed the regulatory factors used to determine whether emissions activities belong to the same major stationary source. The pilot program was developed for the purpose of studying, improving, and streamlining the way the regulatory criteria are used in making oil and gas source determinations in new or renewal title V permits. The pilot program was developed to settle a challenge to a permit-to-operate issued by the EPA. In this case, the applicant had to provide similar information to the EPA fairly late in the permitting process so that the Agency could provide a required response to public comments regarding the source determination. The pilot program avoided further proceedings in that matter, while developing information that could strengthen the EPA's record in making future source determinations. This will ultimately result in less paperwork and provide earlier and greater regulatory certainty as to the application of the regulatory criteria to the oil and gas sector. The pilot program is time and location limited. It only applies to the first six title V permit applications (new or renewal) submitted to EPA Region 8, or until October 2013, whichever comes first. To date, no permit applications have been received under the pilot program.

**3. Does EPA intend for New Source Review permitting to be applicable to oil and gas fields? How could an oil and gas field be permitting under the NSR pre-construction permitting program when the expansion and development of an oil and field evolves over time and is not a traditional industrial source?**

Response:
The Clean Air Act requires that NSR permitting apply to any new or modified source that has the potential to emit regulated pollutants greater than threshold amounts. NSR permitting is not limited to specific industry categories and thus also applies to oil and gas sources if they have sufficiently large potential emissions. There are oil and gas sources that are major sources and have sought permits. Many industries have sources that evolve over time, and the NSR program applies to changes at sources that make physical or operational changes that result in an increase in emissions greater than the significance threshold.

**4. Emissions at well-sites have never been regulated under NSPS because well pad emissions are extremely low. How does EPA justify regulating the oil and gas industry given that emissions from these sites are well below any threshold of concern?**

Response:
Natural gas well completion activities are a significant source of volatile organic compound (VOC) emissions, which occur when natural gas and non-methane hydrocarbons are vented to the atmosphere during flowback of a hydraulically fractured gas well. VOCs are precursors to ozone and PM2.5, both of which have been shown to have adverse health effects at low levels of exposure. The EPA estimates that uncontrolled gas well completions involving hydraulic fracturing vent substantially (approximately 200 times) more VOCs than uncontrolled completions not involving hydraulic fracturing (i.e., conventional gas wells). Specifically, the EPA estimates that uncontrolled well completion emissions for a hydraulically fractured gas well are approximately 23 tons of VOCs, whereas emissions for a conventional gas well completion are around 0.12 tons VOCs. Prior to this rulemaking, the last NSPS for the Oil and Gas Sector was promulgated in 1985. At that time, hydraulically fractured gas wells were not common, thus VOC emissions at wells sites were far lower than they are today. Additionally, the

information the EPA received on hydraulically fractured oil wells suggests that emissions from these wells are far lower than gas wells, and thus emissions from hydraulic fracturing of oil wells are not covered under this NSPS.

**5. Other Clean Air Act programs, such as minor source permitting programs that are implemented by the States, were already regulating the low emitting sources in the oil and gas industry. Why did EPA find it necessary to regulate these low emitting sources when the States were already doing so under the Clean Air Act?**

Response:
This rulemaking draws from successful aspects of existing state programs in Wyoming and Colorado and applies these standards nationally, leveling the playing field across all states and providing substantial and cost-effective health and environmental benefits. As described in the response to question four, well completions at hydraulically fractured gas wells are a substantial source of VOC emissions. Colorado and Wyoming are already regulating these emissions, but hydraulic fracturing is rapidly spreading across the country and into states without permitting programs designed for this new form of gas exploration and production. A national program based on the successes of existing state programs yields significant benefits to human health and the environment.

**6. In the 2008 Consolidated Appropriations Act, Congress directed EPA to inventory of greenhouse gas (GHG) emissions above "appropriate thresholds." Subpart W is the section of the resultant EPA rule targeting onshore oil and natural gas production. In theory, only a facility that meets the threshold of 25,000 tons/year would be required by the rule to purchase and install monitoring equipment and report GHG emission levels to EPA. However, even though most individual wells would never come close to meeting the GHG thresholds, EPA's sweeping definition of a single "facility" will require operators to install costly equipment on every well. This is because in its novel definition, EPA defines a "facility" as a bundling of all petroleum or natural gas equipment on a well pad or associated with a well pad in a single hydrocarbon basin. Significantly, some of these hydrocarbon basins are so large that under this expansive approach all wells under common ownership along the Gulf Coast of Texas and Louisiana and are treated as one facility. Likewise, all wells under common ownership in State of Pennsylvania would be considered one facility. Why has EPA created this unprecedented definition of "facility?" Why did EPA not use a definition equivalent to the definition of a facility under the Clean Air Act as modified by the intent of Section 112 (n)(4)?**

Response:
When the EPA proposed subpart W of the Greenhouse Gas Reporting Rule, its goal was to provide a facility definition that all producers can directly apply, and that would be both practical and cost-effective. The EPA sought public comment on a range of possible options for defining the facility that would report with respect to onshore petroleum and natural gas production, ranging from defining the facility at the individual well pad, to defining the facility at the field-level, to defining the facility at the basin-level. Taking into account public comments, the EPA finalized the definition of a facility with respect to onshore petroleum and natural gas production using a basin-level approach because the operational boundaries and basin demarcations are clearly defined, widely known, and the approach covered over 80 percent of emissions from onshore petroleum and natural gas production.

In addition, the EPA developed subpart W in a way that would maximize rule coverage while keeping reporting burden to a minimum, including the reporting burden on small facilities. For example, the EPA provided a threshold for reporting, and certain methodologies for specific emission sources allow for alternative methods that would reduce burden and maintain data quality. The GHG calculation methodologies used in the rule generally include the use of engineering calculations, emissions modeling software, and emission factors, or, when other methods are not feasible, direct measurement of emissions.

Subpart W is a reporting rule that collects information on the location and magnitude of GHG emissions from petroleum and natural gas systems. In contrast, Clean Air Act section 112 is a standard setting requirement to regulate air toxics (also referred to as "hazardous air pollutants" or "HAP") listed in that section.

**7. Despite the exploration and production industry being such a small contributor to GHG emissions, with the more significant amounts coming from an even smaller subset of wells, EPA has put forth a proposal that would impose costly, confusing compliance burdens on almost all operators. Even of the smallest wells, at the real risk of having them be shut-in, must conduct what was supposed to be one year inventory on whether industry's GHG emissions are closer to 3 or 6 percent. What was EPA's rationale for selecting an this expansive approach burdening all producers as opposed to a more strategic proposal that would target the few sources with the greatest potential to emit GHGs?**

Response:
All producers are not required to report under subpart W of the Greenhouse Gas Reporting Rule. The EPA did consider options to minimize burden, and finalized a threshold for reporting from onshore petroleum and natural gas production of 25,000 metric tons $CO_2$ equivalent, meaning that facilities that fall below the threshold are not required to report. Many industry stakeholders expressed support for a 25,000 metric ton $CO_2$ equivalent threshold because it sufficiently captures the majority of GHG emissions in the United States, while excluding many of the smaller facilities and sources.

**8. Inexplicably, EPA has already promulgated NESHAPS and NSPS for the very emissions it purports to inventory. If this rule really needed for EPA to obtain accurate and reliable emissions measures, why did EPA already set NESHAPS and NSPS requirements before obtaining these inventories?**

Response:
The purpose of the oil and gas regulations was not to inventory GHG emissions, but to control VOC and hazardous air pollutant (HAP) emissions from this sector. The EPA used several sources of data in order to base these rules on the most accurate information on the oil and gas industry possible. Some examples of these sources are:

- Data provided by the oil and natural gas industry to the EPA Natural Gas STAR Program. The program has been working collaboratively with industry since 1993.
- Data provided as part of the formal public notice and comment process during the rulemaking.
- Gas composition profiles from the Western Regional Air Partnership (WRAP).
- Data from the National Emissions Inventory (NEI) to perform the Risk Assessment.
- Data from the 2011 update of the U.S. Inventory of Greenhouse Gas Emissions, which included over 1,000 production wells across the United States.

While the EPA is confident that our current rules were based on the best information available when they were released, including the 2011 update of the U.S. Inventory of Greenhouse Gas Emissions, the EPA will continue to refine and improve our knowledge of the oil and gas industry as data and information become available. This process of continual improvement requires updating the U.S. Inventory of Greenhouse Gas Emissions as emissions change and new data become available.

General

**9. EPA cannot regulate technology into existence. Experts have serious concerns that the equipment prescribed to conduct Reduced Emission Completions will simply not be available in time to comply with the final rule schedule. If it takes years to manufacture sufficient specialized equipment and adequately train operators how to safely conduct these operations, how will EPA accommodate these anticipated impracticabilities?**

Response:
Through EPA and industry events and collaborative studies, the EPA has interacted with operating companies that have extensive experience implementing reduced emissions completions (REC). In particular, the EPA developed a detailed study on RECs in collaboration with oil and gas companies (Lessons Learned from Natural Gas STAR Partners Reduced Emissions Completions for Hydraulically Fractured Natural Gas Wells, available at: http://www.epa.gov/gasstar/documents/reduced_emissions_completions.pdf). Based on information received in public comments following proposal, the EPA believes that, currently, there is already significant demand for REC equipment. For example, Colorado, Wyoming, the City of Fort Worth, Texas, and the City of Southlake, Texas, require REC under certain conditions. Additionally, public comments, reports to the EPA's Natural Gas STAR Program and press statements from companies indicate that some producers implement REC voluntarily, based upon economic and environmental objectives.

Under the rule, RECs are not immediately required of all well completions. Through 2014, the required "best system of emission reduction" (BSER) for well completions is to combust completion emissions. REC as an alternative to combustion is permitted by the rule so that facilities that are able to obtain REC equipment may still capture completion emissions using REC. This period will provide flexibility for industry to ensure equipment is available to capture natural gas in time to meet compliance deadlines. After January 1, 2015, capturing completion emissions using REC will be considered the BSER and will be required under the NSPS.

**10. How do the EPA's economic analyses take into consideration the vast differences between formations and types of operations? Specifically what did EPA study and consider related to considerations and variations based on: (1) wet v. dry plays; (2) tight formations; (3) wildcat and exploratory wells; (4) depth of the fracturing; (5) directional drilling; and (6) size, type, and complexity of operation. Does EPA include all possible compliance costs and operational variables? When or under what circumstances do completion controls cease to be economically profitable?**

Response:
Economic analyses conducted by the EPA to support the NSPS rulemaking can be found in the

Regulatory Impact Analysis released with the final rule. In the United States, thousands of hydraulically fractured natural gas wells are completed annually across a wide geographic range. These gas wells are completed in a variety of formation types using a wide range of technical approaches. Given this high variability and the fact that the economic analysis supporting the NSPS must rely upon forecasts of future natural gas exploration and development, the data are not available to estimate cost impacts for every possible combination of factors. Rather, to estimate national-scale cost impacts of the NSPS, the EPA relied upon costs estimates that were representative of a wide range of conditions using the best data available to the EPA. It should be noted, however, that Reduced Emissions Completions (RECs) requirements in the NSPS do not apply to all hydraulically fractured natural gas well completions. RECs are not required of hydraulically fractured wildcat and delineation natural gas wells and hydraulically fractured natural gas wells where reservoir pressure is not sufficient to perform an REC. These low pressure wells are predominantly located in coalbed methane basins.

However, the EPA recognizes that the variability of certain assumptions used to estimate the national-level regulatory costs can influence national cost estimates, such as the assumptions about natural gas prices at the wellhead, the costs to perform green completions, and the potential emissions from hydraulically fractured natural gas well completions. As result, the EPA performed sensitivity analyses of the influence of these key factors on the engineering costs estimate of the final NSPS. These sensitivity analyses identify the combinations of wellhead natural gas prices, green completion costs, and potential emissions levels at which the NSPS requirements break-even financially. For further details on this sensitivity analysis, please refer to Section 3.2.2 of the Regulatory Impact Analysis (RIA) for this rulemaking.

**11. What was the price of natural gas used by when completing the economic analyses for these rules? Did EPA's economic analysis accommodate for vast swings in spot prices for natural gas? Did EPA review historic figures and analysis? Did EPA make future pricing projections?**

Response:
In its economic analysis, the EPA assumed that onshore producers in the lower 48 states received $4/Mcf for natural gas at the wellhead, an assumption that was based on the commonly referenced Annual Energy Outlook 2011 forecast. As the price assumption is very influential on estimated annualized engineering costs, the EPA performed a sensitivity analysis of the influence of the assumed wellhead price paid to natural gas producers on the overall engineering annualized costs estimate of the promulgated NSPS. For further details on this sensitivity analysis, please refer to Regulatory Impact Analysis (RIA) for this rulemaking. The EPA also examined historical gas prices in the Industry Profile chapter of the RIA.

**12. The Director of Wyoming Department of Environmental Quality, John Corra, explained a very unique phenomenon experienced in the Upper Green River Basin during the winter of 2008. When the problem arose, the state had the immediate flexibility to rapidly study the localized issue, pinpoint the problem, and work with industry to quickly tailor unique solutions and contingency plans. This agile model is the antithesis of a nationalized, one-size-fits-all approach. What steps is the EPA taking to ensure that the new oil and gas NSPS and future regulations will not interfere with the minor source programs states have in place? How can EPA replicate the speed, accuracy, and efficiency demonstrated by local regulators working in conjunction with industry to find workable solutions to unique problems? What is EPA doing to ensure the local**

**flexibility required to create effective, common-sense regulations?**

Response:
This rulemaking draws from the successful aspects of existing state programs in Wyoming and Colorado and applies them nationally, leveling the playing field across all states and providing substantial and cost-effective health and environmental benefits. Colorado, Wyoming and Fort Worth, Texas already require reduced emission completions (RECs) at hydraulically fractured well sites. The NSPS does not impose additional requirements for control of emissions from well completions on operators in those locations.

Throughout the development of the rule, the EPA consulted with state agencies through teleconferences and site visits. In August of 2010, the project team conducted several days of site visits arranged and accompanied by the Colorado Department of Public Health and Environment and by the Wyoming Department of Environmental Quality. These consultations and site visits enabled the EPA to design a rule that works in conjunction with successful existing state programs and avoids undermining those programs. For example, notifications submitted by operators per state advance well completion notification requirements are considered by the EPA to satisfy the advance notification requirements for well completions under the NSPS. Additionally, the rule is not prescriptive regarding the steps that must be performed as part of an REC, allowing flexibility for operators to adjust to site-specific situations. The EPA has continued its consultation with state agencies as it has moved into the implementation phase of the rule.

**13. What is the anticipated carbon footprint of compliance with the rules? (Including the life-cycle impact of paper work, man hours, transit, recordkeeping, technology, and other related compliance costs?)**

Response:
Based on available data, the EPA believes that the carbon footprint associated with complying with these rules would be small, particularly in relation to the very large climate co-benefits associated with reducing methane emissions. The control techniques used to avoid VOC and HAP emissions can create secondary impacts, which may partially offset the benefits of these rules by increasing emissions of carbon monoxide, NOx, particulate matter and other pollutants. Also, these rules could slightly alter the distribution of national fuel consumption between natural gas, petroleum, and coal (which have different carbon footprints). The EPA estimated the magnitude of these secondary impacts in the Regulatory Impact Assessment (RIA) for the rules, finding that the magnitude of these secondary air pollutants is likely to be small. According to the RIA, the averted $CO_2$-equivalent emissions reductions from new sources are estimated at 19.2 million metric tons in 2015, while additional $CO_2$-equivalent emissions from control techniques and shifts in fuel consumption are estimated at 1.6 million metric tons in 2015, indicating a net decrease of $CO_2$-equivalent emissions of 17.6 million metric tons. The EPA does not have data regarding the carbon footprint of paperwork and recordkeeping, but it is likely to be very small.

**14. EPA has indicated that it expects all future fossil fueled power plants to use natural gas rather than coal. Now EPA has issued a proposal to tighten the PM standards and create non-attainment areas in the very states (PA & OH) where that natural gas is and will be produced. How will we be able to tap that gas, fuel our electricity and create jobs if EPA proceeds with its proposal to**

**create more non-attainment areas?**

Response:
The EPA has not proposed additional nonattainment areas for PM. Rather, on June 14, 2012, the Agency issued a proposal to strengthen the nation's air quality standards for fine particle pollution to improve public health and visibility. The EPA anticipates that if these standards are finalized, few additional areas would have air quality that does not meet the standards. Furthermore, the EPA's modeling indicates that virtually all areas, including all counties in Pennsylvania and Ohio, would be in attainment with the standards by 2020 due to existing rules and programs.

If new PM standards are finalized in December 2012, the EPA anticipates making attainment/nonattainment designations for any counties that do not meet the standards by December 2014, with those designations likely becoming effective in early 2015. States would have until 2020 (five years after designations are effective) to meet the proposed health standards.

Recent Clean Air Act rules are projected to help states meet the proposed standards by dramatically cutting pollution both regionally and across the country. These rules include rules to reduce pollution from power plants, clean diesel rules for vehicles, and rules to reduce pollution from stationary diesel engines. The EPA does not anticipate that investments in oil and gas development would significantly interfere with this rapid progress toward reducing particle pollution.

**15. Industry recently released a comprehensive study relying on data from ten times the number of wells as the previous EPA estimate for methane emissions and found that EPA's emissions estimate in some instances were a factor of2 too high and other studies have found overestimations of closer to 1400%. How long will it take for EPA to update its emissions inventory to reflect the more comprehensive data? How does the more comprehensive industry methane emissions data affect EPA's cost-effectiveness assertions in the oil and gas rule?**

Response:
The EPA evaluated all data received through the comment period to the New Source Performance Standards, including the above referenced emissions study on hydraulically fractured well completions. As a result of this assessment, the EPA concluded that the original EPA emission factor provides a valid central estimate of emissions from this source in the U.S. The EPA is confident that its emissions estimates and cost analyses were based on the best data available at the time of the calculations. More details on our review of emissions data and comments received through the NSPS can be found in the Technical Support Document to the NSPS at:
http://www.epa.gov/airquality/oilandgas/pdfs/20120418tsd.pdf.

The EPA notes that the most recent industry study it is aware of does not include new emissions data on sources covered by the NSPS, but rather only includes new activity data (e.g., hydraulically fractured wells counts). The EPA will continue to evaluate all new data relevant to estimating emissions, including data received after the NSPS comment period, such as the recent industry study, for potential incorporation in the Inventory of U.S. Greenhouse Gas Emissions and Sinks (Inventory). The EPA welcomes stakeholder feedback on the natural gas sector estimates in the Inventory, and new data and information on updates to the estimates. For the upcoming Inventory development cycle, the EPA will be holding a stakeholder workshop on key aspects of the estimates of GHG emissions from the natural

gas sector in the Inventory.

**16. Methane occurs naturally in ambient air. Atmospheric methane surveys and soil gas sampling can be used to establish baseline methane levels and then detect changes in methane concentration as shale gas well development occurs. DOE's NETL lab is undertaking such a research effort, which will include fugitive emissions in PA. For example, methane from both natural seeps and from pre-existing wells and pipelines is expected to be present at the Washington County site prior to development. What is EPA's role in this effort? What are the opportunities for the broader oil and natural gas industry (not just the single operator) to participate in this study? How is the information being shared with interested stake holders? How will these results be used to re-evaluate the rules?**

Response:
The EPA is not involved in the DOE/NETL research effort to measure methane from fugitive sources in Pennsylvania. Although there may be opportunities for the broader oil and natural gas industry to participate in the study, such opportunities would need to be explored through DOE. DOE has consistently shared information from their studies with interested stakeholders, and the approaches to such information transfer will be determined by DOE. The information they develop can provide data that will add to our understanding of fugitive methane emissions from oil and gas development activities. This may allow the EPA to update methane emission estimates in certain EPA programs, such as the U.S. Greenhouse Gas Inventory.

**17. The proposed rule purports to not regulate GHGs, but rather VOCs. However, many natural gas streams produced today contain little or no VOCs. Despite this, EPA calculated cost effectiveness based on natural gas that is 18% by weight VOC. The cost effectiveness (in dollars per ton of VOC reduced) approaches infinity as VOC content approaches zero. How does EPA economically justify its regulations for not just for the average "model" facility, but for reasonably expected variations? Why did EPA ignore this reality and select a one-size-fits-all approach instead of focusing regulations on streams with a minimum VOC content? Do these rules regulate any facilities that emit no VOC's or HAP's at all? If so, how does the Agency justify this?**

Response:
The EPA did not set a VOC threshold for well completions, because available data does not support establishing a threshold and because of implementation concerns. Specifically, even if such a VOC concentration threshold were applied, to ensure compliance with the rule, an operator would have to determine with certainty before the beginning of flowback whether a particular well was going to be above or below the threshold in order to mobilize the necessary capture equipment and secure a flow line, etc. This would require the operator to determine the reservoir composition, e.g., the gas composition prior to separation, in advance of the well completion (i.e., the determination of whether the well would be subject to the NSPS would have to be performed before the information on which to base such a determination would be available). Although nearby existing wells could potentially provide some indication of the general VOC content of the gas from the future well in question, there would be no assurance of certainty. Although the EPA did not set a VOC threshold for well completions, it improved the final rule by including a subcategory of "low pressure" wells that will not be required to perform green completions. This will remove over 85 percent of the coalbed methane wells (which may be relatively low in VOC content) from those required to perform green completions (these wells will

only be required to use flaring to control emissions).

The EPA did include a VOC emissions threshold for application of the storage vessel standards. During the rulemaking, the EPA evaluated the cost-effectiveness of regulating storage tanks with various levels of crude oil and condensate throughput rates. The EPA estimated that storage vessels with a throughput rate of one barrel per day of crude oil, or twenty barrels per day of condensate, emit about six tons per year of VOC. The EPA determined that regulation at these throughput levels was cost-effective. Accordingly, affected storage vessels are limited to those which emit at least six tons per year of VOCs.

With regard to low VOC streams, the EPA did not finalize proposed requirements for pneumatic controllers and compressors located in the transmission and storage segment, since these devices handle and emit pipeline quality gas, which is very low in VOC content.

**18. Emissions data was recorded from several NOAA observation towers throughout the country, including two in California, two in Colorado, and one each in Texas, Oklahoma, and Wisconsin. According to the NOAA study, the Wisconsin tower, "in the middle of the Chequamegon National Forest" recorded a higher methane level than the tower in the middle of the Denver-Julesburg Basin. Why would a tower located in a federally protected forest and far removed from any industrial activity record higher methane emissions than measurements taken in a natural gas field?**

Response:
The EPA did not participate in this study and cannot comment on the specific conditions and data collected from the towers in the study.

**19. Economic analysis of emission control strategies should be representative of real-world operations, include the full variety of conditions, and consider all of the costs of compliance with the proposed rule. For example, API found the cost effectiveness for tanks to vary from $5,271/ton of VOC to $1,519,667/ton of VOC. The "average model facilities" that EPA has used in the economic analysis do not represent the great variation seen across the U.S. Why did EPA ignore these realities and refuse to narrow the proposed regulations to operations in which the proposed emission control practices can be applied in a cost effective manner?**

Response:
As discussed in question ten, natural gas exploration and development in the United States is highly variable across geography, formation type, and technical approach. Given this high variability and the fact that the economic analysis supporting the NSPS must rely upon forecasts of future natural gas exploration and development, the data are not available to estimate cost impacts for every possible combination of factors. Rather, to estimate national-scale cost impacts of the NSPS, the EPA relied upon costs estimates that were representative of a wide range of conditions using the best data available to the EPA. As noted in the response to question seventeen, the EPA could not set a VOC threshold for well completions, because available data did not support establishing a threshold and because of implementation concerns. However, the EPA did set a VOC emissions threshold for application of the storage vessel standards based on cost-effectiveness.

**20. Most producers do not normally track the information EPA requires to be reported for this rule. To begin tracking the GHG emissions required by this rule, America's oil and natural gas producers will be required to purchase costly equipment to affix to their operations merely to inventory GHG emissions. As the rule goes into effect, it is most damaging to America's smaller independents who will have to bear the cost of affixing this inventory equipment to their operations. What specifically is EPA doing to ensure that the rule will be economically feasible for these smaller producers?**

Response:
The EPA established the Greenhouse Gas Reporting Program in 2009 and finalized the requirements for the petroleum and natural gas sector (subpart W) in 2010 after a full notice and comment process. The EPA developed subpart W of the Greenhouse Gas Reporting Rule in a way that would maximize rule coverage while keeping reporting burden to a minimum, including reporting burdens to small facilities. For example, the EPA provided a threshold for reporting, and certain methodologies for specific emission sources, which allow for alternative methods that would reduce burden and maintain data quality. In addition, the GHG calculation methodologies used in the rule generally include the use of engineering calculations, emissions modeling software, and emission factors, or, when other methods are not feasible, direct measurement of emissions.

**21. Ms. McCarthy, in your testimony you stated that ICAC estimated that the implementation of the Clean Air Interstate Rule Phase I created jobs in the air pollution control industry. How many jobs were lost (or alternatively, you used the term "shifted") in other sectors?**

Response:
ICAC did not look at jobs gained or lost in other industries. However, investing in control technologies to reduce air pollution from the U.S. power sector does lead to new opportunities for American businesses, including steel manufacturers, by increasing demand for American workers to install, operate, and maintain pollution control equipment. ICAC looked at the employment effect of CAIR in the control technology industry and estimated that implementation of CAIR Phase 1 resulted in 200,000 jobs in the air pollution control industry. This large-scale assessment is supported by evidence from specific emission reduction projects. For example, at its peak, Alabama Power's $1.7 billion scrubber initiative, which was launched in 2005 and contributes to CAIR compliance, created more than 2,300 jobs. According to Charles McCrary, Alabama Power president and CEO, "this investment [was] not only good for the environment, it [was] also good for Alabama's economy."

**22. 42 USC 7411(f) requires consultation with State Governors and air pollution control agencies before expanding the listed categories or promulgating new NSPS. Has EPA conducted the required consultations with the States with significant the oil and gas transportation and distribution sectors? Will EPA revise the requirements for reduced emission completions requirements, storage vessels, pneumatic controllers, and compressors in NSPS, Subpart OOOO based on continued consultation?**

Response:
The EPA interprets 111(f)(3) to apply only to the initial promulgation of the NSPS regulation for a listed source category. The NSPS regulation for the listed oil and natural gas source category was promulgated in 1985. Furthermore, the EPA did not expand the category listing in the recent revision to

the oil and natural gas NSPS, because the EPA concluded that the current listing covers the new emission sources. The EPA therefore does not believe that section 111(f)(3) is implicated in this instance.

However, during development of the rule, the EPA consulted with state agencies. In August of 2010, the project team conducted several days of site visits arranged and accompanied by the Colorado Department of Public Health and Environment and by the Wyoming Department of Environmental Quality. The EPA arranged several teleconferences with the States of Texas, Colorado, and Wyoming as we continued to develop the rulemaking. Further, the EPA briefed the Western Regional Air Partnership (WRAP), participated in WRAP teleconferences, and referred to data developed by WRAP in our rulemaking. The EPA participated in several teleconferences, and, in February of 2011, briefed the Marcellus Shale Working Group, which included the EPA, industry, and state agencies. After the public comment period, the EPA arranged teleconferences to obtain further clarification of comments submitted by Colorado and Wyoming. The EPA believes this state consultation improved the quality of the final action. In addition, the EPA incorporated provisions in the final rule that it believes will help minimize permitting burden on state agencies, owners, and operators. For example, existing gas wells that are refractured are not "affected facilities" under the NSPS if the well completion operation is conducted using REC and meets notification, reporting, and recordkeeping requirements. By not being "affected facilities" under the NSPS, these sources may not be subject to state permitting requirements. Another example of this concept is that, in provisions for pneumatic controllers located in the oil and natural gas production segments (upstream of custody transfer to gas processing plants or oil pipelines), the EPA limited applicability of the final NSPS to only "high bleed" natural gas driven pneumatic controllers. All other pneumatic devices in these segments are not "affected facilities" under the NSPS. Similarly, the EPA removed centrifugal compressors with dry seal systems from final NSPS applicability. The final rule therefore provides flexibility for industry while maintaining the environmental benefits from the rule.

**23. The notifications, monitoring, recordkeeping, testing and reporting requirements for a major source NESHAP regulation are overly burdensome for NSPS Subpart OOOO. Because of the remote, dispersed and unmanned nature of facilities that lack electrical power, make the requirements logistically impractical, technically difficult and uneconomic. Furthermore, the use of NESHAP compliance requirements for storage vessels is confusing and unjustifiably stringent for NSPS. With these considerations in mind, what specific O&G industry appropriate notification, recordkeeping, reporting, and performance testing sections requirements will be included in Subpart OOOO?**

Response:
The EPA understands that the upstream oil and natural gas production industry is unique with regard to the number and remote location of facilities. With this in mind, the final NSPS will achieve significant emission reductions while minimizing burden on operators. In the final rule, the EPA streamlined notification, recordkeeping, and reporting requirements significantly. For example, operators are required to provide only a 2-day advance notification of well completions. This notification may be submitted via e-mail. To avoid duplicative and potentially conflicting advance notification requirements,

the final rule provides that operators who have met advance well completion notification requirements under state regulations are considered to have met the advance notification requirements of the NSPS. Further, the final NSPS exempts operators from pre-construction notifications for wells, pneumatic controllers, and storage vessels that would have been required under the NSPS general provisions. The EPA has also added flexibility to annual reporting requirements by providing a streamlined annual reporting option for well completions in which operators need only submit digital images of each green completion in progress, combined with a list identifying all wells completed during the reporting period, in lieu of submitting detailed records of each well completion.

Monitoring and testing requirements have been balanced with operator burden as well. Operators may rely on results of manufacturer-conducted performance tests for specific models of combustor control devices, instead of conducting performance field tests on each individual combustor.

To avoid confusion, and in response to public comments on the proposed NSPS, the EPA incorporated the storage vessel requirements directly into the NSPS, rather than referring to the NESHAP provisions for storage vessels.

**24. The equipment necessary to comply with the REC requirements is currently not available and will require time to manufacture. Furthermore, industry will have a shortage of experienced contractors or staff for safely doing "reduced emissions completions." Due to the limited availability of appropriate and safe equipment and experienced and trained personnel to perform REC's, what steps is EPA taking to ensure timely manufacturing of equipment and training of operators without premium costs associated with short time-frames?**

Response:
Capturing completion emissions using REC will not be required under the NSPS until January 1, 2015. This period will provide flexibility for industry to ensure equipment is available to capture natural gas in time to meet compliance deadlines. See the response to question nine for more detail.

AL13-000-7483

# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

July 16, 2013

James Jones
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Mr. Jones:

On behalf of the Senate Committee on Environment and Public Works, we invite you to testify before the Committee at a hearing entitled, "Hearing on the Nominations of Kenneth Kopocis to be Assistant Administrator for the Office of Water of the U.S. Environmental Protection Agency (EPA), James Jones to be Assistant Administrator for the Office of Chemical Safety and Pollution Prevention of the EPA, and Avi Garbow to be General Counsel for the EPA." The hearing will be held on Tuesday, July 23, 2013, beginning at 10:00 AM in Room 406 of the Dirksen Senate Office Building. The purpose of this hearing is to consider the nominations of Kenneth Kopocis to be Assistant Administrator for the Office of Water of the EPA, James Jones to be Assistant Administrator for the Office of Chemical Safety and Pollution Prevention of the EPA, and Avi Garbow to be General Counsel for the EPA.

In order to maximize the opportunity to discuss this matter with you and the other witnesses, we ask that your oral testimony be limited to five minutes. Your written testimony can be comprehensive and will be included in the printed record of the hearing in its entirety, together with any other materials you would like to submit.

To comply with Committee rules, please provide 100 double-sided copies of your testimony at least 48 hours in advance of the hearing to the Committee at the following address: 410 Dirksen Senate Office Building, Washington, DC 20510-6175. To ensure timely delivery, the copies of testimony must be hand delivered to 410 Dirksen. Please do not send packages through FedEx, U.S. Mail, or overnight delivery services, because they will be subject to offsite security measures which will delay delivery. Please also email a copy of your testimony (in both MS Word and as a PDF file) to the attention of Mara Stark-Alcalá, Mara_Stark-Alcala@epw.senate.gov, at least 48 hours in advance.

If you plan to use or refer to any charts, graphs, diagrams, photos, maps, or other exhibits in your testimony, please deliver or send one identical copy of such material(s), as well as 100 reduced (8.5" x 11") copies to the Committee, to the attention of Mara Stark-Alcalá, Mara_Stark-Alcala@epw.senate.gov, to the above address at least 48 hours in advance of the hearing. Exhibits or other materials that are not provided to the Committee by this time cannot be used for the purpose of presenting testimony.

If you have any questions or comments, please feel free to contact Grant Cope of the Committee's Majority staff at 202-224-8832 or Bryan Zumwalt of the Committee's Minority staff at 202-224-6176.

Sincerely,

Barbara Boxer
Chairman

David Vitter
Ranking Member

# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

July 16, 2013

Avi Garbow
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

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Sincerely,

Barbara Boxer
Chairman

David Vitter
Ranking Member

# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

July 16, 2013

Kenneth Kopocis
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Mr. Kopocis:

On behalf of the Senate Committee on Environment and Public Works, we invite you to testify before the Committee at a hearing entitled, "Hearing on the Nominations of Kenneth Kopocis to be Assistant Administrator for the Office of Water of the U.S. Environmental Protection Agency (EPA), James Jones to be Assistant Administrator for the Office of Chemical Safety and Pollution Prevention of the EPA, and Avi Garbow to be General Counsel for the EPA." The hearing will be held on Tuesday, July 23, 2013, beginning at 10:00 AM in Room 406 of the Dirksen Senate Office Building. The purpose of this hearing is to consider the nominations of Kenneth Kopocis to be Assistant Administrator for the Office of Water of the EPA, James Jones to be Assistant Administrator for the Office of Chemical Safety and Pollution Prevention of the EPA, and Avi Garbow to be General Counsel for the EPA.

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Sincerely,

Barbara Boxer
Chairman

David Vitter
Ranking Member

AL13-000-7497

# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

June 7, 2013

Michael H. Shapiro
Deputy Assistant Administrator, Office of Water
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Deputy Assistant Administrator Shapiro:

Thank you for appearing before the Committee on Environment and Public Works on May 22, 2013, at the hearing entitled, "Nutrient Trading and Water Quality." We appreciate your testimony and we know that your input will prove valuable as we continue our work on this important topic.

Enclosed are questions for you that have been submitted by Senators Cardin, Vitter, and Boozman for the hearing record. Please submit your answers to these questions by COB June 21, 2013, to the attention of Mara Stark-Alcalá, Senate Committee on Environment and Public Works, 410 Dirksen Senate Office Building, Washington, DC 20510. In addition, please provide the Committee with a copy of your answers via electronic mail to Mara_Stark-Alcala@epw.senate.gov. To facilitate the publication of the record, please reproduce the questions with your responses.

Again, thank you for your assistance. Please contact Jason Albritton of the Majority Staff at (202) 224-8832, or Brandon Middleton of the Minority Staff at (202) 224-6176 with any questions you may have. We look forward to reviewing your answers.

Sincerely,

Barbara Boxer
Chairman

David Vitter
Ranking Member

**Environment and Public Works Committee Hearing**
**May 22, 2013**
**Follow-Up Questions for Written Submission**

Questions for Shapiro

Questions from:

Senator Benjamin Cardin

1. Is it accurate that multiple independent entities as well as previous Administrations have all highlighted the benefits of using numeric nutrient criteria? Why have these entities recommended the use of numeric criteria?

2. Does the use of numeric nutrient criteria imply the use of a single nation-wide or state-wide standard? Can numeric nutrient criteria be used in a flexible manner that adapts to local conditions?

3. Can EPA play a constructive role, in consultation with the states, in helping to establish new water quality trading markets? Can you describe the types of assistance that EPA can provide to States in establishing and managing water quality trading programs?

Senator David Vitter

1. In your written testimony you indicate that EPA is "committed to finding collaborative solutions that protect and restore our waters and the health of the communities that depend on them." You also state that EPA "recognizes that states need room to innovate and respond to local water quality needs, and that a one-size-fits-all solution to nitrogen and phosphorous pollution is neither desirable nor necessary."

   I think this emphasis on collaboration and state innovation is helpful, and I appreciate EPA's recognition that there is not one single solution to the issue of nutrient pollution. Based on your testimony, is it fair to say that EPA's role in nutrient trading will be to assist state trading efforts, and that EPA will not be in the business of mandating certain standards or regulatory schemes for nutrient trading?

2. EPA has a 2003 Trading Policy, as well as a Water Quality Trading Toolkit. These documents seem helpful, but my concern is that EPA may at some point move from a Toolkit to a rule or regulation that would give the states little to no flexibility on nutrient trading. Can you assure me that EPA's input on nutrient trading will maintain a suggestive tone and not come in the form of heavy-handed regulations?

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3. We understand and support EPA's opposition to "one-size-fits-all" water quality policy, especially in regard to limiting and reducing nutrient levels in U.S. waterways. Unfortunately, this "one-size-fits-all approach" is precisely what is being advocated, in effect, by many environmental groups. For example, in 2008, various environmental groups submitted a rulemaking petition for your agency to establish nutrient water quality standards and Total Maximum Daily Loads (TMDLs) to control nitrogen and phosphorous "for *all water bodies in all states*," a demand that completely contradicts the notion of state innovation and the principle of state primacy in setting water quality standards established by the Clean Water Act. Fortunately, you denied the petition, although I understand that the environmental groups have continued their overreaching demands -- at least in regard to Mississippi River basin states -- through costly litigation in my home state of Louisiana (*Gulf Restoration Network v. USEPA*, No. 2:12-cv-677 [EPA's motion to dismiss and motion for summary judgment pending]). I would like to thank you for opposing these unhelpful environmentalist demands. Can you comment on EPA's opposition to these demands for EPA to impose sweeping nutrient criteria on Mississippi River basin states, and how these demands impact EPA's policy of using multiple, flexible approaches -- including nutrient trading -- to address nutrient issues?

4. Are there any other recent examples where environmental groups have actually impeded nutrient pollution reduction?

5. You state in your written testimony that "[t]rading can occur between point sources, or between point and nonpoint sources." Can you elaborate on how trading between point and nonpoint sources might work and whether it is a realistic way to achieve nutrient pollution reduction?

6. You have also indicated that "water quality trading should occur within a watershed or a defined area for which a [Total Maximum Daily Load] has been approved" under Section 303 of the Clean Water Act. Once EPA has approved a TMDL, and assuming a state decides to implement the TMDL through a trading program, what authority does EPA have to decline or disapprove of the state's implementation plan?

7. I do not believe EPA has any role in dictating to the states how to implement or achieve an established TMDL, whether it's through trading or other mechanisms. Courts have recognized that "there is no statutory language [in the Clean Water Act] requiring submission to or approval of a State's [TMDL] implementation plan by the EPA." *Bravos v. Green*, 306 F. Supp. 2d 48, 57 (D.D.C. 2004). Do you know of any authority to the contrary?

8. In your written testimony you also briefly discuss the general issue of nutrient pollution, and you reference "EPA's most recent National Aquatic Resource Surveys of aquatic health," which apparently examined various water stressors and found that "nitrogen and phosphorous are the most pervasive in the Nation's small streams and lakes," and that "[a]pproximately 50 percent of streams and more than 40 percent of lake acres have high or medium levels of nutrients." Am I correct in assuming that the Surveys you have referenced include EPA's draft National Rivers and Streams Assessment for 2008 and 2009, which EPA released this past February?

9. I have deep concerns about EPA's draft Assessment. In order to determine water quality conditions across the country, EPA compared sampling results with conditions at "least-disturbed" sites in different regions. According to EPA, this "least-disturbed" benchmark standard is defined as those sites that are "least-disturbed by human activities." In other words, the waterbodies examined by EPA in its survey were compared to waterbodies located in places where few, if any, people live—or, as EPA put it, those waterbodies where there is "the least amount of human ambient disturbance."

   The problem this creates is that it prejudices the Assessment's analysis. No matter the improvements that farmers, municipalities, and industry have worked together to achieve to improve our Nation's waterways, many of the waterways will be determined as unhealthy because they are compared to a world in which humans don't use water. EPA supposedly selected the sampling sites at random, however, it appears as if the Agency cherry-picked the benchmark from which to analyze the sites. EPA's flawed method accordingly led to a highly misleading Assessment. What was your involvement in developing this draft Assessment?

10. I appreciate EPA's willingness to offer input on the subject of nutrient trading. However, if the Agency is going to base its comments on flawed environmental analyses, then its recommendations will be called into question. Going forward on the subject of nutrient trading, can you commit to refraining from relying on the draft Assessment, or at least ensuring that EPA cures the various flaws I and others have identified [i.e. the American Farm Bureau] in the Assessment?

Senator John Boozman

For Questions 1-3: In 2008, an organization called EarthJustice filed a lawsuit against EPA claiming that EPA was required by federal law to impose numeric nutrient criteria in Florida. In August of 2009, EPA entered a consent decree with EarthJustice to settle the 2008 lawsuit. In that settlement, EPA committed to finalize numeric nutrient standards in Florida. This was strongly opposed by the State of Florida, which believed they had been shut out of that process.

1. Mr. Shapiro, did the organization, EarthJustice, receive attorneys' fees from the federal government in association with the Florida numeric nutrient criteria case? If so, how much?

2. At the 2011 EPW hearing on this topic, a witness for the State of Florida testified that EPA's nutrient rule would cost over $1 billion. EPA said that the potential incremental costs associated with the Florida nutrient rule would be less than $25 million per year. Importantly, a committee of the National Academy of Sciences did an independent review of the rule's implementation cost. According to the Congressional Research Service, they found that EPA "underestimated the cost of implementing the rule and questioned the validity of several assumptions in EPA's cost analysis." Has EPA taken any steps in response to the National Academy review of EPA costs analysis?

3. Will EPA incorporate the findings of the NAS report into its cost-benefit analysis practices?

4. Mr. Shapiro, you testified that "EPA recognizes that States need room to innovative and respond to local water quality needs and that one size fits all solutions to nitrogen and phosphorus pollution is not desirable or necessary." I agree. Do you agree that some states currently utilize this "room to innovate and respond to local water quality needs" by implementing narrative nutrient criteria?

5. Mr. Shapiro, you mentioned, as a "noteworthy case," Connecticut, where municipal wastewater treatment plants are trading to achieve nitrogen reduction goals for the Long Island Sound. Has the EPA considered proactively facilitating dialogue or other forms of information exchange between experienced trading stakeholders (such as these Connecticut municipalities) and other entities that are interested in exploring trading opportunities?

6. Mr. Shapiro, in your testimony, you mentioned that Virgina encourages the creation of pools of credits ahead of the market, thereby providing additional certainty for some potential trading participants. Would you please share any views you may have on the benefits or drawbacks to this approach?

7. Mr. Shapiro, given that, as one of our witnesses testified "water quality based effluent limitations are placed in permits, where there is the narrative" criteria, do you believe it would be possible to set-up an effective nutrient trading program in states that have narrative nutrient criteria? If so, please elaborate. If not, why not?

8. Mr. Shapiro, do you support EPA cooperation on nutrient trading with states that would prefer to maintain narrative nutrient criteria?

9. Mr. Shaprio, do you agree that various quantifiable water quality conditions, such as algal biomass accumulation, can be used to effectively determine whether certain water quality objectives are being achieved, in states that have narrative nutrient criteria?

10. Mr. Shapiro, what hurdles, if any, need to be cleared in order to allow effective nutrient trading to occur in a watershed or a defined area for which a TMDL has not been approved?

11. Mr. Shapiro, generally speaking, what would be the downsides to legislation that would dictate how states implement water quality trading programs?

12. Mr. Shapiro, do you agree that water quality monitoring can be very expensive, and that in order to effectively measure non-point source reductions, without discouraging participation in a trading program, it is most practical and prudent to carry out such monitoring on a watershed basis?

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 3 1 2013

OFFICE OF CONGRESSIONAL
AND INTERGOVERNMENTAL RELATIONS

The Honorable Barbara Boxer
Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Chairman Boxer:

Thank you for your June 7, 2013, letter to Michael Shapiro enclosing Questions for the Record from the Committee's May 22, 2013, hearing entitled, "Nutrient Trading and Water Quality." Enclosed are responses to the questions posed by members of the Committee.

Thank you again for your letter. Please feel free to contact me if you have any questions, or your staff may contact Denis Borum in my office at (202) 564-4836.

Sincerely,

Laura Vaught
Associate Administrator

Enclosure

AL-13-000-7497

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUL 3 1 2013

OFFICE OF CONGRESSIONAL
AND INTERGOVERNMENTAL RELATIONS

The Honorable David Vitter
Ranking Member
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Senator Vitter:

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Thank you again for your letter. Please feel free to contact me if you have any questions, or your staff may contact Denis Borum in my office at (202) 564-4836.

Sincerely,

Laura Vaught
Associate Administrator

Enclosure

13-000-7497

**EPA Responses to Follow-Up Questions for Written Submission**
**Subcommittee on Water and Wildlife**
**Senate Committee on Environment and Public Works**
**Hearing: "Nutrient Trading and Water Quality," May 22, 2013**

**Senator Benjamin Cardin**

**1. Is it accurate that multiple independent entities as well as previous Administrations have all highlighted the benefits of using numeric nutrient criteria? Why have these entities recommended the use of numeric criteria?**

Response: In 2009, the State-EPA Nutrient Innovations Task Group published a report, "An Urgent Call to Action: Report of the State-EPA Nutrient Innovations Task Group," that focused on drawing attention to the need for nutrient reduction strategies including the importance of numeric nutrient criteria. This report noted that the issue of excess nutrients has been studied and documented extensively and that there have been numerous major reports, a substantially large number of national and international scientific studies, and a growing number of quantitative analyses and surveys at the state and national levels highlighting the pervasive and growing problems caused by excess levels of nitrogen and phosphorus in our nation's waters. The report lists a number of examples of key reports on nutrient pollution from various sources, including the EPA's Science Advisory Board, the National Academy of Sciences' National Research Council, and the National Oceanic and Atmospheric Administration. The U.S. Geological Survey, in seeking advice on which contaminants were most important to focus on in developing its National Water-Quality Assessment Program, obtained almost unanimous agreement that nutrients were a widespread and longstanding issue.

As part of a nutrient reduction strategy, numeric nutrient water quality standards create clear environmental baselines, as compared to narrative standards, and provide for more effective watershed protection management by allowing more efficient development of Total Maximum Daily Loads and protective National Pollutant Discharge Elimination System (NPDES) permits limits, to provide quantitative targets to support trading, to evaluate the success of nonpoint source reduction programs, and to measure environmental progress. The EPA's support for numeric standards has been expressed on several occasions. The first was a June 1998 National Strategy for Development of Regional Nutrient Criteria issued under the Clinton Administration. Under the Bush Administration, a November 2001 national action plan was issued for the development and establishment of numeric nutrient criteria. Then, in 2007, the EPA reaffirmed the need for the states to adopt numeric nutrient criteria and for the EPA to assist states, territories and authorized tribes with that effort, and provided a national update on the development of numeric nutrient water quality standards and the need for accelerating the pace of progress. In 2008, the EPA published "State Adoption of Numeric Nutrient Standards 1998–2008," the first national report on progress made by the states in adopting numeric nutrient water quality standards.

Under the Obama Administration, the EPA reemphasized the urgency of nitrogen and phosphorus pollution by forming the State-EPA Nutrient Innovations Task Group (NITG) in

2009 to focus on reducing nitrogen and phosphorus pollution in U.S. waters. And most recently, in 2011, the EPA published a memorandum reaffirming its commitment to partnering with states and stakeholders to address nitrogen and phosphorus pollution. Both documents reiterate the notion that numeric nutrient criteria are ultimately necessary for effective nutrient control programs, while reinforcing the need for effective partnerships between the EPA, states, and other stakeholders.

**2. Does the use of numeric nutrient criteria imply the use of a single nation-wide or state-wide standard? Can numeric nutrient criteria be used in a flexible manner that adapts to local conditions?**

Response: The EPA believes numeric nutrient criteria can be developed and used in a flexible manner that adapts to local conditions. The EPA does not believe that a single nation-wide or state-wide numeric nutrient criteria value would be appropriate or scientifically sound. In fact, as part of its 1998 nutrient criteria strategy, the EPA committed to develop recommended regionally-based numeric nutrient criteria that reflect geographic variation and waterbody types.

The EPA fulfilled the commitments made in the 1998 strategy, and in 2000-2001 published technical guidance for developing numeric nutrient criteria for lakes and reservoirs; rivers, streams and estuaries; and for coastal waters, and the agency also published a series of recommended criteria values for 12 ecoregions for lakes and reservoirs, 13 ecoregions for rivers and streams, and one ecoregion for wetlands. In 2007, the EPA also published technical guidance for developing numeric nutrient criteria for wetlands. The agency expected states to use these waterbody type guidance manuals and recommended numeric nutrient target values as a guide in deriving and adopting numeric nutrient water quality criteria into state standards.

The EPA has always maintained that states could develop nutrient criteria that protect specific designated uses by utilizing the process outlined in the guidance manuals, by adopting EPA's recommended numeric nutrient criteria, or by using other scientifically defensible methods and appropriate water quality data. The EPA encourages states to accelerate their efforts and give priority to adopting numeric nutrient water quality standards or numeric translators for all waters that contribute nutrient loadings to our nation's waterways, but believes that states should determine how best to prioritize their waters. The EPA has also provided direct technical support to states for the development of numeric nutrient criteria.

**3. Can EPA play a constructive role, in consultation with the states, in helping to establish new water quality trading markets? Can you describe the types of assistance that EPA can provide to States in establishing and managing water quality trading programs?**

Response: Yes, the EPA believes that it can play an important role in providing technical assistance and other support to states that are designing and implementing trading programs. The EPA continues to support water quality trading as a tool for meeting CWA requirements in a more flexible and cost-effective way, and believes that its Water Quality Trading Policy and Water Quality Trading Toolkit for Permit Writers can help guide states in developing trading programs consistent with the CWA. The EPA will continue to review newly proposed trading programs for consistency with CWA requirements, review draft state NPDES permits that

incorporate trading, provide training, participate in state and stakeholder-sponsored workgroups when invited, and otherwise support states in developing trading programs.

**Senator David Vitter**

**1. In your written testimony you indicate that EPA is "committed to finding collaborative solutions that protect and restore our waters and the health of the communities that depend on them." You also state that EPA "recognizes that states need room to innovate and respond to local water quality needs, and that a one-size-fits-all solution to nitrogen and phosphorous pollution is neither desirable nor necessary."**

**I think this emphasis on collaboration and state innovation is helpful, and I appreciate EPA's recognition that there is not one single solution to the issue of nutrient pollution. Based on your testimony, is it fair to say that EPA's role in nutrient trading will be to assist state trading efforts, and that EPA will not be in the business of mandating certain standards or regulatory schemes for nutrient trading?**

Response: Yes, the EPA will continue to assist states as they pursue water quality trading programs. The EPA has no current plans to mandate nationally how nutrient trading programs must operate. A key principle in trading programs is ensuring that such programs are consistent with the Clean Water Act. For that reason, the EPA will continue to work with states to ensure that their trading programs are consistent with the Act. The EPA believes that the agency's 2003 Water Quality Trading Policy and 2007 Water Quality Trading Toolkit for Permit Writers, both available at www.epa.gov/waterqualitytrading, provide helpful guidance to states on ensuring that trading programs are consistent with the Clean Water Act. We also look forward to continuing to work with states in the context of the EPA's ongoing NPDES oversight role to ensure that individual trades embodied in NPDES permits are also consistent with the Act.

**2. EPA has a 2003 Trading Policy, as well as a Water Quality Trading Toolkit. These documents seem helpful, but my concern is that EPA may at some point move from a Toolkit to a rule or regulation that would give the states little to no flexibility on nutrient trading. Can you assure me that EPA's input on nutrient trading will maintain a suggestive tone and not come in the form of heavy-handed regulations?**

Response: The EPA has no current plans to promulgate national rules specific to water quality trading.

**3. We understand and support EPA's opposition to "one-size-fits-all" water quality policy, especially in regard to limiting and reducing nutrient levels in U.S. waterways. Unfortunately, this "one-size-fits-all approach" is precisely what is being advocated, in effect, by many environmental groups. For example, in 2008, various environmental groups submitted a rulemaking petition for your agency to establish nutrient water quality standards and Total Maximum Daily Loads (TMDLs) to control nitrogen and phosphorous "for all water bodies in all states," a demand that completely contradicts the notion of state innovation and the principle of state primacy in setting water quality standards established by the Clean Water Act. Fortunately, you denied the petition, although I understand that**

**the environmental groups have continued their overreaching demands-- at least in regard to Mississippi River basin states-- through costly litigation in my home state of Louisiana (Gulf Restoration Network v. US EPA, No. 2: 12-cv-677 [EPA's motion to dismiss and motion for summary judgment pending]). I would like to thank you for opposing these unhelpful environmentalist demands. Can you comment on EPA's opposition to these demands for EPA to impose sweeping nutrient criteria on Mississippi River basin states, and how these demands impact EPA's policy of using multiple, flexible approaches -- including nutrient trading -- to address nutrient issues?**

Response: The EPA believes that the most effective and sustainable way to address widespread and pervasive nutrient pollution in the Mississippi-Atchafalaya River Basin (MARB) and elsewhere is to work cooperatively with states and tribes to strengthen their nutrient management programs. This approach, in the agency's judgment, is preferable to undertaking a rulemaking to promulgate federal numeric nutrient criteria, or developing a Total Maximum Daily Load, for all MARB states. The EPA's March 16, 2011 memorandum, "Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions," reaffirms the EPA's commitment to partnering with states and collaborating with stakeholders to make greater progress in accelerating the reduction of nitrogen and phosphorus loadings to our nation's waters. The memorandum synthesizes key principles that are guiding and have guided agency technical assistance and collaboration with states and urges the EPA Regions to place new emphasis on working with states to achieve near-term reductions in nutrient loadings.

The EPA believes that states, the EPA, and stakeholders, working in partnership, must make greater progress in accelerating the reduction of nitrogen and phosphorus loadings to our nation's waters. While the EPA has a number of regulatory tools at its disposal, our resources can best be employed by catalyzing and supporting action by states to protect their waters from nitrogen and phosphorus pollution. The EPA can most effectively encourage progress through on-the-ground technical assistance and dialogue with state officials and stakeholders, coupled with cooperative efforts with agencies like the U.S. Department of Agriculture (USDA) that have expertise and financial resources to spur improvement in best practices by agriculture and other important sectors.

States need room to innovate and respond to local water quality needs, so a one-size-fits-all solution to nitrogen and phosphorus pollution is neither desirable nor necessary. Nonetheless, our prior work with states points toward a framework of key elements that state programs should incorporate to maximize progress. The EPA's discussions with states have focused on tailoring the framework to particular state circumstances, taking into account existing tools and innovative approaches, available resources, and the need to engage all sectors and parties in order to achieve effective and sustained progress. Our experience in over 40 years of Clean Water Act implementation demonstrates that motivated states, using tools available under federal and state law and relying on good science and local expertise, can mobilize local governments and stakeholders to achieve significant results.

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**4. Are there any other recent examples where environmental groups have actually impeded nutrient pollution reduction?**

Response: The EPA is unaware of any recent examples in which environmental groups have prevented or impeded nutrient pollution reductions.

**5. You state in your written testimony that "[t]rading can occur between point sources, or between point and nonpoint sources." Can you elaborate on how trading between point and nonpoint sources might work and whether it is a realistic way to achieve nutrient pollution reduction?**

Response: The EPA believes that trading between point and nonpoint sources can be a realistic way to achieve nutrient pollution reductions. A critical issue for ensuring effective trading between point and nonpoint sources is ensuring that pollutant load reductions from nonpoint sources are adequately documented. The EPA's 2007 Water Quality Trading Toolkit for Permit Writers includes a section devoted specifically to point-to-nonpoint-source trading and helps explain how nonpoint sources can document their pollutant reductions. For example, the document describes how, in some cases, nonpoint source pollutant load reductions can be measured directly. In cases where such load reductions cannot be measured directly, the EPA recommends that state programs use the best-available performance information to estimate load reductions of a particular best management practice (BMP), and then discount these estimated values using uncertainty ratios to account for the technical challenges in determining BMP effectiveness.

Using such approaches, trading between point and nonpoint sources has been successfully implemented in Pennsylvania and Oregon, for example, for nutrient and temperature trading, respectively.

**6. You have also indicated that "water quality trading should occur within a watershed or a defined area for which a [Total Maximum Daily Load] has been approved" under Section 303 of the Clean Water Act. Once EPA has approved a TMDL, and assuming a state decides to implement the TMDL through a trading program, what authority does EPA have to decline or disapprove of the state's implementation plan?**

Response: While the EPA encourages states to develop and implement plans to achieve TMDL targets, as it did in connection with the 2010 Chesapeake Bay TMDL, the EPA does not approve or disapprove such plans when it approves or disapproves TMDLs. *Sierra Club v. Meiburg* (2002) and *Amigos Bravos v. Green* (2004) distinguish between TMDLs and their implementation plans. The *Meiburg* court noted the difference as follows: "A TMDL is defined to be a set measure or prescribed maximum quantity of a particular pollutant in a waterbody . . . while an implementation plan is a formal statement of how the level of that pollutant can and will be brought down to or kept under the TMDL." The court in *Amigos Bravos* said there "is no statutory language requiring submission to or approval of a State's implementation plan by the EPA; rather, the statute only required that the EPA approve or disapprove a State's TMDL." As the *Meiburg* court noted, "The responsibility for implementing the TMDLs once they were established was left to [the State], as it is in the Clean Water Act itself."

While the EPA does not approve or disapprove state TMDL implementation plans, it does have an interest in their successful implementation, and the agency has authority under other sections of the CWA to review individual actions states may take to implement TMDLs. For example, the CWA and its implementing regulations at 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permits for point sources include water quality-based effluent limitations as necessary to implement applicable water quality standards and that are consistent with the assumptions and requirements of any available wasteload allocation established in a TMDL. Most states have delegated authority to issue NPDES permits, subject to EPA oversight. In four states, the EPA directly issues NPDES permits. As part of its CWA authority to oversee state-issued NPDES permits, the EPA can review and potentially object to provisions in state-issued permits, including trading provisions, that are not consistent with CWA requirements.

**7. I do not believe EPA has any role in dictating to the states how to implement or achieve an established TMDL, whether it's through trading or other mechanisms. Courts have recognized that "there is no statutory language [in the Clean Water Act] requiring submission to or approval of a State's [TMDL] implementation plan by the EPA." Bravos"· Green, 306 F. Supp. 2d 48, 57 (D.D.C. 2004). Do you know of any authority to the contrary?**

Response: See answer to Question 6, above. The EPA is not aware of any authority to the contrary.

**8. In your written testimony you also briefly discuss the general issue of nutrient pollution, and you reference "EPA's most recent National Aquatic Resource Surveys of aquatic health," which apparently examined various water stressors and found that "nitrogen and phosphorous are the most pervasive in the Nation's small streams and lakes," and that "[a]pproximately 50 percent of streams and more than 40 percent of lake acres have high or medium levels of nutrients." Am I correct in assuming that the Surveys you have referenced include EPA's draft National Rivers and Streams Assessment for 2008 and 2009, which EPA released this past February?**

Response: No. The statements about the pervasiveness of nutrient pollution in the nation's small streams and lakes were based on the National Aquatic Resource Survey of lakes published in 2007 and the National Aquatic Resource Survey of small streams published in 2006.

**9. I have deep concerns about EPA's draft Assessment. In order to determine water quality conditions across the country, EPA compared sampling results with conditions at "least disturbed" sites in different regions. According to EPA, this "least-disturbed" benchmark standard is defined as those sites that are "least-disturbed by human activities." In other words, the waterbodies examined by EPA in its survey were compared to waterbodies located in places where few, if any, people live-or, as EPA put it, those waterbodies where there is "the least amount of human ambient disturbance."**

**The problem this creates is that it prejudices the Assessment's analysis. No matter the improvements that farmers, municipalities, and industry have worked together to achieve to improve our Nation's waterways, many of the waterways will be determined as**

**unhealthy because they are compared to a world in which humans don't use water. EPA supposedly selected the sampling sites at random, however, it appears as if the Agency cherry-picked the benchmark from which to analyze the sites. EPA's flawed method accordingly led to a highly misleading Assessment. What was your involvement in developing this draft Assessment?**

Response: The National Rivers and Streams Assessment (NRSA) is one of a series of National Aquatic Resource Surveys (NARS) implemented by the EPA's Office of Water and Office of Research and Development, and our state and tribal partners. The approaches used in the NARS program are based on a substantial body of peer-reviewed and well-documented scientific work. The draft NRSA report was peer reviewed in September 2012 by a panel of experts. The NARS program itself grew out of extensive research and pilot studies conducted by the EPA's Office of Research and Development in cooperation with states. The NARS program fills a critical gap in information on water quality identified by the Government Accountability Office, the National Research Council and other independent reviewers. NARS is a key program for assessing the condition of the nation's waters and tracking changes over time. NARS developed out of the need for a scientifically robust and statistically representative understanding of water quality conditions and trends in the U.S. It relies on nationally consistent lab and field methods, an unbiased and statistically valid framework for randomized selection of sites that represent the broader population of waters, and an ecoregion-based reference condition approach for interpreting the data.

The NRSA approach for developing benchmarks using reference conditions is consistent with current science, EPA guidance, state practice, and established protocols for ecological risk assessment. It is based on EPA guidance for development of nutrient criteria, which includes identification of reference reaches considered to be the least impacted systems of the region. It is important to emphasize that the NRSA findings are not Clean Water Act determinations of impaired water status. Such determinations are made by the states on specific waterbody segments using applicable state standards.

The EPA's approach for establishing reference conditions in the National Rivers and Streams Assessments is a well-documented, systematic process that screens sites using chemical and physical data to identify the least-disturbed sites within each ecological region. While some reference sites in some ecoregions have low levels of human disturbance, many are located in watersheds with substantial human use. For example, the percent of agricultural land use in watersheds used in establishing reference conditions for nutrients ranged from 0 to 99%. Approximately 13% of the reference sites used to establish thresholds across the country had more than 50% agriculture in the watershed.

The draft NRSA does not support the conclusion that rivers and streams in watersheds that have experienced human disturbance cannot meet the benchmarks for good condition developed using the EPA's ecoregional, reference-based approach. Based on the draft NRSA results, a substantial number of these sites are able to meet the thresholds for good condition. Across the country, for example, 335 of the NRSA sites have more than 50% agricultural land use in the watershed. According to the draft NRSA assessment, more than 20% of these 335 sites rated "good" for Total Nitrogen and a similar percentage rated "good" for Total Phosphorus.

I was involved in launching the NARS program nearly a decade ago. Throughout the planning, field work, and analysis phases of the draft National Rivers and Streams Assessment, I met periodically with staff implementing the assessment to review their work. I also reviewed the draft report prior to its release.

**10. I appreciate EPA's willingness to offer input on the subject of nutrient trading. However, if the Agency is going to base its comments on flawed environmental analyses, then its recommendations will be called into question. Going forward on the subject of nutrient trading, can you commit to refraining from relying on the draft Assessment, or at least ensuring that EPA cures the various flaws I and others have identified [i.e. the American Farm Bureau] in the Assessment?**

Response: The EPA does not believe that the approaches used in the draft National Rivers and Streams Assessment (NRSA) are flawed. The National Rivers and Streams Assessment, along with the other National Aquatic Resource Surveys (NARS), provides valuable information on the overall condition of our nations rivers and streams. While providing the first comprehensive and statistically representative picture of our nation's rivers and streams, the draft NRSA shows similar overarching patterns as state water quality assessments reports. Overall, both the state data in Section 305(b) reports and the NRSA show that a large number of our nation's river and stream miles are stressed by pollution. Both reports show that similar stressors (pathogens, sediment, and nutrients) are widespread and greatly affect our aquatic resources.

As described above, the EPA released the 2008-09 NRSA in draft format for public comment, and looks forward to reviewing the comments it has received as it prepares to finalize the Assessment.

It is important to note that the NRSA is not designed to provide information that identifies which potential management options, including trading, should be selected or implemented at a specific site or within a specific watershed, and the EPA does not use the NRSA information in this way.

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**Senator John Boozman**

**For Questions 1-3: In 2008, an organization called EarthJustice filed a lawsuit against EPA claiming that EPA was required by federal law to impose numeric nutrient criteria in Florida. In August of 2009, EPA entered a consent decree with EarthJustice to settle the 2008 lawsuit. In that settlement, EPA committed to finalize numeric nutrient standards in Florida. This was strongly opposed by the State of Florida, which believed they had been shut out of that process.**

**1. Mr. Shapiro, did the organization, EarthJustice, receive attorneys' fees from the federal government in association with the Florida numeric nutrient criteria case? If so, how much?**

Response: Yes. The United States settled Earthjustice's request for payment of its costs of litigation, including attorneys' fees, for $198,997.00.

**2. At the 2011 EPW hearing on this topic, a witness for the State of Florida testified that EPA's nutrient rule would cost over $1 billion. EPA said that the potential incremental costs associated with the Florida nutrient rule would be less than $25 million per year. Importantly, a committee of the National Academy of Sciences did an independent review of the rule's implementation cost. According to the Congressional Research Service, they found that EPA "underestimated the cost of implementing the rule and questioned the validity of several assumptions in EPA's cost analysis." Has EPA taken any steps in response to the National Academy review of EPA costs analysis?**

Response: Yes, the EPA has taken steps to respond to the National Academy's review of the agency's cost estimates, where doing so has been appropriate in light of additional steps taken by the State of Florida to adopt its own numeric nutrient criteria.

On June 13, 2012, the State of Florida subsequently submitted its rules for numeric nutrient limits for lakes, flowing waters, and a set of estuaries and coastal marine waters. On November 30, 2012, the EPA approved these state rules. As a result, the agency did not go back and revise the economic analysis for the Phase 1 federal rule because that rule was superseded by the EPA's approval of the State of Florida's rules.

However, in the economic analysis for the coastal and estuary criteria (Phase 2) proposal published on December 18, 2012, the EPA made significant changes to its approach to address the NRC recommendations and suggestions.

As a result of recent actions taken by the State of Florida, the EPA anticipates that the combination of the State of Florida's actions and modification to EPA's 2009 determination (that federal numeric nutrient criteria were necessary to protect Florida's waters) should enable the agency to conclude that finalization of the federal numeric nutrient criteria contained in its November 30, 2012, proposal is unnecessary, following the EPA's approval of Florida's standards.

**3. Will EPA incorporate the findings of the NAS report into its cost-benefit analysis practices?**

Response: As noted above, the EPA has made significant changes to its approach to address the NRC recommendations that are applicable to the analysis of costs for the coastal and estuary criteria (Phase 2) proposal published on December 18, 2012. In response to the National Academy's review, the EPA incorporated many of the recommendations and suggestions made throughout the report, including:

- Using the Hydrologic Unit Code (HUC-12) watershed unit of analysis;
- Analyzing potential costs for unassessed waters that could be incrementally impaired;
- Analyzing costs for each industrial plant rather than extrapolating the results from a small sample;
- Reviewing actual experience from existing TMDLs to identify BMPs sufficient to meet numeric targets;
- Considering permeable reactive barriers for septic systems and their installation costs; and
- Considering uncertainty in government expenditures.

The EPA believes this revised approach sheds light on the costs and benefits associated with its numeric nutrient criteria rules and complies with the Executive Order requirements for conducting economic analysis of regulations.

**4. Mr. Shapiro, you testified that "EPA recognizes that States need room to innovative and respond to local water quality needs and that one size fits all solutions to nitrogen and phosphorus pollution is not desirable or necessary." I agree. Do you agree that some states currently utilize this "room to innovate and respond to local water quality needs" by implementing narrative nutrient criteria?**

Response: Some states have made progress by relying on narrative standards to control nitrogen and phosphorus pollution, but the implementation of narrative standards can often be difficult, resource-intensive, subject to litigation, and time-consuming. Progress has been made, but the EPA believes that further effort is needed to move more quickly and more comprehensively in order to make a difference in addressing the challenges of growing nitrogen and phosphorus pollution from increasing population, expanding and more intensive agricultural activities, and spreading urbanization.

Numeric water quality standards for nitrogen and phosphorus pollution can facilitate more rapid, effective, and efficient program implementation. Adopting numeric standards has a number of key advantages, including easier and faster development of Total Maximum Daily Loads and quantitative targets to support trading programs; easier to write NPDES permits; increased clarity in evaluating the success of nitrogen and phosphorus runoff minimization programs; and more measurable, objective water quality baselines against which to measure environmental progress.

**5. Mr. Shapiro, you mentioned, as a "noteworthy case," Connecticut, where municipal wastewater treatment plants are trading to achieve nitrogen reduction goals for the Long Island Sound. Has the EPA considered proactively facilitating dialogue or other forms of**

**information exchange between experienced trading stakeholders (such as these Connecticut municipalities) and other entities that are interested in exploring trading opportunities?**

Response: Yes, the EPA continues to actively support sharing the knowledge and experience gained from one state to another as they choose to develop trading programs. For example, the EPA sponsored a trading workshop in November 2012 with many stakeholders, including states, private sector agricultural consultants, the U.S. Department of Agriculture, environmental market non-governmental organizations, and for-profit conservations "banks."

**6. Mr. Shapiro, in your testimony, you mentioned that Virginia encourages the creation of pools of credits ahead of the market, thereby providing additional certainty for some potential trading participants. Would you please share any views you may have on the benefits or drawbacks to this approach?**

Response: The EPA defers to states on how they wish to design their trading programs to maximize the efficiency of such programs. In observing programs across the country, we have observed that several states have expressed interest in creating "banks" (reserves of credits) or developing lists of potential willing credit suppliers. We believe the Virginia approach provides an easily understood example that other states may follow if they choose to do so, and we look forward to working with states to ensure that the trading programs they develop are effective and consistent with the Clean Water Act.

**7. Mr. Shapiro, given that, as one of our witnesses testified "water quality based effluent limitations are placed in permits, where there is the narrative" criteria, do you believe it would be possible to set-up an effective nutrient trading program in states that have narrative nutrient criteria? If so, please elaborate. If not, why not?**

Response: Both narrative and numeric criteria for nutrients provide the legal bases for developing TMDLs, watershed loading analyses, and numeric water quality-based effluent limits in NPDES permits. The primary difference is that narrative criteria must first be translated into numeric water quality "targets" to enable development of allowable nutrient loadings and enforceable water quality-based effluent limits. This translation is often a technically challenging process.

Once narrative criteria have been translated into numeric water quality targets, and these targets are used to establish water quality-based effluent limitations, trading can proceed as it would if the criteria were numeric. In other words, both narrative and numeric criteria are translated into permit limits, and it is only after those limits are set that trading would occur.

**8. Mr. Shapiro, do you support EPA cooperation on nutrient trading with states that would prefer to maintain narrative nutrient criteria?**

Response: The EPA believes that trading can be accomplished pursuant to both numeric and narrative water quality criteria. However, doing so for a numeric criterion is typically more straightforward than for a narrative criterion, because the narrative criterion would typically need to first be translated into a numeric water quality "targets" to enable development of allowable

nutrient loadings and enforceable water quality-based effluent limits. In this way, numeric nutrient criteria provide some advantages, such as efficiency and measurability, that may more easily facilitate trading.

**9. Mr. Shapiro, do you agree that various quantifiable water quality conditions, such as algal biomass accumulation, can be used to effectively determine whether certain water quality objectives are being achieved, in states that have narrative nutrient criteria?**

Response: Various qualitative and quantitative water quality measures are currently being used by states that have narrative nutrient criteria to determine whether certain water quality objectives are being achieved (i.e., designated uses are being met). However, the EPA believes that relying solely on monitored responses to nutrient pollution is not necessarily the most effective and efficient manner to protect designated uses and maintain the physical, chemical and biological integrity of our nation's waters for several reasons. This is why the agency has strongly advocated for states to adopt numeric nutrient criteria for over fifteen years.

- First, relying solely on response measures may allow a waterbody to reach a heavily polluted and degraded state before corrective actions can be taken to address the problem. Addressing pollution problems before they cause harmful impacts may be less expensive for communities than waiting for harmful impacts to occur before taking action. Response measures that measure only these harmful impacts after they happen may make cleanup more costly. For example, using a response indicator such as algal biomass on its own to measure waterbody health could prevent detection of a water quality problem until algal biomass begins accumulating (as in an algal bloom). Once such a bloom begins, it could worsen to the point where vacationers do not want to swim, other aquatic life is smothered, or fish kills occur. It is difficult to catch these types of responses in an early-enough stage to allow the state to identify the need for and then implement corrective actions to reduce the amount of nutrient pollution entering the waterbody before a use is actually impaired.
- Second, response measures can be masked by other pollution problems in a particular waterbody. For example, sediment or other toxic pollutants can in some cases prevent the growth of algae even when nutrient levels are high. If a state were to rely solely on the presence of algae for assessing the health of a waterbody, then the waterbody might appear healthy as a result of high toxics or sediment and high nutrients. However, if the toxics or sediment pollution were later controlled, the waterbody could see a significant, unexpected, and uncontrolled algal response.
- Third, when a state relies solely on the response at a given site, nutrient pollution may continue to create problems downstream. In these cases, if the near-term problem were ignored, larger scale corrective actions – potentially in the form of watershed-wide TMDLs – might become necessary to correct the resulting problem in a downstream estuary or coastal area.
- Finally, relying solely on response measures requires the permit writer or TMDL developer to develop a quantifiable target for the pollutant of interest (namely nitrogen and/or phosphorus) on a permit-by-permit or TMDL-by-TMDL basis. With respect to TMDL development, the quantifiable target provides the basis for determining the allowable pollutant load necessary to attain water quality standards. With respect to NPDES permits, the quantifiable target provides the basis to develop enforceable water

quality-based effluent limitations to prevent water quality impairments where a discharge may cause, have a reasonable potential to cause, or contribute to an excursion above applicable water quality standards.

The EPA is aware that some states are interested in using response measures in combination with numeric criteria for nitrogen and phosphorus. The EPA has led several workshops on this approach, bringing together scientists and state managers to discuss the issue. The EPA is currently evaluating how this can be done with sufficiently robust indicators that provide a clear early indication of the effect of nutrient pollution. In approving the State of Florida's recent numeric water quality standards, the EPA determined that Florida's new method of applying numeric limits for the amount of nutrient pollution allowed in lakes and streams takes into account quantifiable response measures in a manner that is scientifically sound, and more effective and efficient than the state's previous narrative nutrient criterion approach. This approach is used to identify and prevent nutrient pollution in lakes and streams, and also addresses the need to protect downstream waters.

**10. Mr. Shapiro, what hurdles, if any, need to be cleared in order to allow effective nutrient trading to occur in a watershed or a defined area for which a TMDL has not been approved?**

Response: While a TMDL is not necessary to institute a trading program, it is often the most effective driver to push facilities toward the need to trade, and often offers significant watershed analyses that are extremely helpful in setting up a trading program. However, the EPA does not see any regulatory hurdle to trading *before* a TMDL has been established.

**11. Mr. Shapiro, generally speaking, what would be the downsides to legislation that would dictate how states implement water quality trading programs?**

Response: As mentioned above, a one-size-fits-all approach is not the EPA's preference for trading, as flexibility in implementation is one benefit of trading, and legislation could run the risk of inhibiting that flexibility. At the current time, the EPA believes that the Clean Water Act provides sufficient flexibility to enable states to establish water quality trading programs, and looks forward to working with states interested in developing such programs.

**12. Mr. Shapiro, do you agree that water quality monitoring can be very expensive, and that in order to effectively measure non-point source reductions, without discouraging participation in a trading program, it is most practical and prudent to carry out such monitoring on a watershed basis?**

Response: Yes, the EPA recognizes that water quality monitoring can be costly for states, and we share your interest in ensuring that monitoring is as efficient and effective as possible. At the same time, the EPA believes that monitoring is a critical element in water quality trading programs to ensure that pollution reductions can be demonstrated. The EPA's Water Quality Trading Toolkit and other resources can help provide guidance to states on how to develop effective and efficient monitoring programs to support trading.

AL 14-000-8909



# United States Senate

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

WASHINGTON, DC 20510-6175

April 23, 2014

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Ave., NW
Washington, DC 20460

Dear Administrator McCarthy:

Thank you for appearing before the Committee on Environment and Public Works on March 26, 2014, at the hearing entitled, "Oversight Hearing on the Environmental Protection Agency's Fiscal Year 2015 Budget." We appreciate your testimony and we know that your input will prove valuable as we continue our work on this important topic.

Enclosed are questions for you that have been submitted by Senators Boxer, Markey, Vitter, Wicker, and Fischer for the hearing record. Please submit your answers to these questions by COB May 7, 2014, to the attention of Nathan McCray, Senate Committee on Environment and Public Works, 410 Dirksen Senate Office Building, Washington, DC 20510. In addition, please provide the Committee with a copy of your answers via electronic mail to Nathan_McCray@epw.senate.gov. To facilitate the publication of the record, please reproduce the questions with your responses.

Again, thank you for your assistance. Please contact Jason Albritton of the Majority Staff at (202) 224-8832, or Bryan Zumwalt of the Minority Staff at (202) 224-6176 with any questions you may have. We look forward to reviewing your answers.

Sincerely,

Barbara Boxer
Chairman

David Vitter
Ranking Member

Questions from:

Senator Barbara Boxer

1. Given the importance of limiting carbon pollution and addressing climate change, increasing EPA's FY2015 Budget to address climate change is critical. Can you please explain how increased funding for the Agency's climate change work will ensure that state governments can efficiently implement and comply with any planned or existing Clean Air Act standard that establishes limits on carbon pollution from stationary sources?

2. The EPA's FY 2015 Budget supports implementation of the President's Climate Action Plan by calling for limits under the Clean Air Act on carbon pollution from cars, trucks, and power plants. Are these agency actions consistent with the Supreme Court decision in *Massachusetts v. EPA* (2007) and more recent decisions from the U.S. Court of Appeals for the D.C. Circuit?

3. EPA's revolving loan programs for drinking and waste water infrastructure help to ensure that the water we drink is safe and that our lakes and rivers are clean. EPA's budget request cuts funds for these important programs. Can you please explain how EPA will ensure adequate investments in clean water and drinking water are being made?

4. The EPA has reported on the impressive and immediate health and environmental benefits of the National Diesel Emission Reduction Act Program, including significant reductions in air pollutants such as $NO_x$ and Particulate Matter. I am concerned that the EPA's budget asks to eliminate funding for this very successful program. Can you please explain how the Agency will make new gains in reducing air pollution from diesel engines and how the Agency will ensure continuing public health and environmental benefits from such air pollution reductions?

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5. The President's Executive Order on Chemical Safety directs the Federal Working Group to identify actions that will better protect people from hazards at chemical facilities. I recently held a hearing on the Executive Order and was concerned that the Working Group has identified few actions to improve oversight. I believe that we must move forward as rapidly as possible. Delay is unacceptable.

   As a follow-up to the hearing, I asked the EPA witness to provide the Committee with a detailed explanation of how the Federal Working Group has met each of the required actions in the Executive Order and to provide the Committee with quarterly status updates on implementation of the Executive Order. Will you ensure that EPA responds to this request as soon as possible?

6. In December 2008, a devastating coal ash spill occurred in Kingston, Tennessee. More recently, an EPA-listed high hazard coal ash impoundment at a Duke Energy facility in North Carolina spilled into the Dan River threatening drinking water supplies down river from the facility. How will the Agency ensure that when it completes final rules concerning the disposal of coal ash later this year that there are adequate federal protections in place to protect communities near coal ash impoundments from this hazardous material?

**Environment and Public Works Committee Hearing**
**March 26, 2014**
**Follow-Up Questions for Written Submission**

Questions for McCarthy

7. EPA's Office of Inspector General recently completed an investigation of EPA's actions in the Parker County, Texas groundwater contamination case. OIG found that EPA acted appropriately when it issued an emergency order in that case, and when EPA lifted the order after the State agreed to investigate. However, OIG questioned the quality of data provided by Range Resources and whether residents in the community may still have unsafe drinking water. EPA agreed to take specific steps in response to the OIG's recommendation, including requesting additional information from Range Resources. Can you please provide an update on the status of EPA's implementation of the OIG's recommendations?

8. According to the Agency indoor radon is the nation's second leading cause of lung cancer and causes about 21,000 deaths each year. About one in 15 American homes contain high levels of radon. I am concerned that EPA's budget would cut funding for state and tribal grants to address this preventable cause of cancer. Can you please explain how the Agency will ensure that the public is properly protected from the threat of radon and how the public will have continued access to state and tribal programs that can assist them in reducing their risk of exposure to dangerous levels of radon?

9. I have been a strong supporter of EPA working to protect children's health from dangerous air and water pollution. EPA's budget increases environmental justice funding to improve environmental conditions in minority and low-income communities across the country and to enhance enforcement of clean air and other protections in at-risk communities, near schools and in other areas where children may be exposed to toxic pollution. Can you please describe how the Agency will use this budget request to strengthen environmental protections for these communities and enhance the environmental health of the country's most vulnerable populations?

10. In December 2013, in response to the OIG's Early Warning Reports in the John Beale fraud case, the EPA has taken a number of corrective actions to prevent future occurrences of such fraud. Can you please confirm your commitment to providing regular updates on the progress the Agency has made in addressing the issues raised in the OIG's report?

Senator Edward J. Markey

1. It's been nearly 4 years since the Deepwater Horizon drilling rig sank into the Gulf of Mexico causing an environmental catastrophe at a magnitude never seen in this country. In our frantic response to the oil that was gushing into the Gulf we used unprecedented amounts of chemical dispersants over an extended period of time. We also applied these dispersants under the water, in a way they were never intended to be used. Concerns about the toxicity and environmental impacts of the primary chemical dispersant used, known as Corexit, led the EPA to announce that it would be doing additional research and would propose changes to the list of approved chemical dispersants and other remediation agents.

    a. When can we expect that these changes will be published?

    b. Will these changes incorporate the results of the impacts of prolonged and/or subsurface use of dispersants?

2. The NPDES permit for the Pilgrim Nuclear Power Station has been administratively extended by EPA for almost 20 years. When will the EPA complete its work to update the permit in a comprehensive manner?

3. In 2011, EPA granted a three-year exemption from regulation under the Clean Air Act for carbon emissions from bioenergy facilities. EPA then commissioned an expert panel of the Science Advisory Board to review the Agency's proposed bioenergy carbon accounting framework. They found that EPA's framework needed to account for the important ongoing role that forests play in sequestering atmospheric carbon dioxide and that **we cannot automatically assume biomass energy is carbon neutral**. Basically, you can't cut down a 150 year old forest, burn it, and assume there's no net carbon impacts. In 2012, my home state of Massachusetts published final carbon accounting regulations using a methodology very similar to those recommended by the Science Advisory Board. Does EPA plan to incorporate these key science-based recommendations into whatever new rules are established to govern carbon emissions from bioenergy?

Senator David Vitter

Topic: John Beale and Internal Controls

1. During the hearing, you attributed the time lapse between when you first learned of John Beale's illegal bonus and when you finally cancelled the bonus to "it t[aking] a while to get to the bottom of the John Beale issue because he was a criminal that had systemically intended to defraud the agency." The January 12, 2011 memorandum you received from Scott Monroe detailed *both* how "EPA policy requires that OAR recertify the bonus annually and re-establish the bonus every three years" *and* how "EPA ha[d] no records to show that these recertifications occurred except for one in 2000."

    a. Did it occur to you upon receipt of the January 12, 2011 memorandum that you had not ever signed annual certification paperwork for Beale's bonus despite having headed OAR at that point for a year and a half?

2. On July 16, 2010, Scott Monroe sent Beth Craig an email which stated unequivocally, "Regardless of the circumstances surrounding overpayment, OAR must submit a request if we intend to continue the retention bonus."

    a. The email indicates that in order for Beale to continue to receive his bonus, it must be affirmatively recertified. Is this an accurate statement of EPA policy?

    b. Did your office recertify the retention bonus?

    c. If you were aware that he was receiving his bonus in error, and that they bonus had not been recertified, why did EPA continue to pay Beale the unearned wages?

3. The January 12, 2011 memorandum you received from Scott Monroe also noted that retention incentives require a showing that there exists a "'special agency need' to retain the employee's services" and a showing that the employee is "'ikely to leave,'" a showing which requires a written offer for outside employment, *both* of which Monroe suggested that Beale "d[id] not appear to meet." Despite these obvious shortcomings, you allowed more than two years to pass before cancelling the bonus in February of 2013. During this time, Mr. Beale collected more than $90,000 in unearned bonuses.

    a. Why was further investigation before cancelling his bonus necessary when Scott Monroe had already demonstrated that the lack of necessary recertifications since 2000?

    b. Why was further investigation before cancelling his bonus necessary when Scott Monroe had already indicated a lack of necessary documentation to meet the "likely to leave" requirement?

    c. Given the high standard for receiving retention incentives, did you—as Mr. Beale's direct supervisor—believe that there existed a "'special agency need' to retain" Mr. Beale's services? If not, why was further investigation before cancelling his bonus necessary?

    d. At the time you permitted the bonuses to continue, did you believe that Mr. Beale was "likely to leave" and had written evidence of outside job offers?

4. Despite the fact that you knew with certainty that the necessary criteria to receive a retention bonus had not been met two years before you took action to cancel the bonus, you had the audacity to assert the following: "[W]hat is true is I did pursue that issue [of Beale's illegal bonus] effectively, and I think the Agency was addressing it effectively."

    a. Please provide your definition of "effective."

    b. What would be an ineffective response to such clear warning signs?

5. What is the foundation of your claim that EPA responded to the issue of Beale's illegal bonus "effectively" when it was allowed to continue without the necessary recertification for more than a decade, during the last two years of which multiple officials were aware of its failure to meet multiple necessary criteria?

6. During the hearing, you responded to one of my questions ("Why, in early 2011 were you reluctant to finalize, to not cancel the bonus? Why were you reluctant to take action?") with the following response: "Actually, I understood that the issue was going to be referred to the Office of the Inspector General." According to the documents made available to the Committee, the first mention of even potentially referring the Beale matter to the OIG occurred only in spring of 2012.

    a. Were you in fact aware of plans to refer the Beale matter to the OIG in 2011?

    b. If so, please provide a detailed description of when and from whom you first heard of plans to refer Beale's compensation issues to the OIG, of whom you were aware had knowledge of the possibility that the Beale matter might be referred to the OIG, and of what you believed came of this plan to refer the matter to the OIG. Please also provide all documentation predating April 1, 2012 in your possession referring to Beale and the OIG in conjunction with each other.

    c. If you incorrectly stated that you believed that the matter was to be referred to the IG, then why in fact were you reluctant to finalize the cancellation of Beale's bonus in early 2011?

7. During the hearing, I quoted from an email produced to me by the OIG from Susan Smith, a Team Leader in the Executive Resources Division of the Office of Administration and Resource Management, to Karen Higginbotham, the Director of the Executive Resources Division. In the email, Ms. Smith attests to Ms. Higginbotham that "Scott Monroe stopped by . . . and said . . . . that Gina is reluctant to finalize [the cancellation of Beale's retention incentive bonus] unless OARM (Craig) gives her the okay that the White House is aware and there will not be any political fallout." You not only expressed unfamiliarity with the email and represented that you had never had a conversation with Ms. Smith, but also asserted that: 1.) you had never spoken with Scott Monroe about the White House in regards to the Beale bonus matter, 2.) you were never concerned "that the White House [would] look at political fallout," and 3.) you "never had concerns about the White House's interference."

    a. Have you ever communicated with anyone at the White House about the Beale matter? If so, please describe these communications to the best of your ability, including the date of the interaction and the individual with whom you interacted. If any documentation exists of such communications, please provide them to the Committee.

b. Did you ever communicate with Craig Hooks, Scott Monroe, or anyone else about the White House in connection to John Beale's misconduct? If so, please describe these communications to the best of your ability, including the date of the interaction and the individual with whom you interacted. If any documentation exists of such communications, please provide them to the Committee. If not, was Mr. Monroe fabricating these concerns?

c. Have you ever been concerned about the potential for "political fallout" from the Beale investigation? If so, what sort of "political fallout"? Please describe in detail.

d. Were you aware of anyone within EPA, or the Obama Administration more broadly, who was concerned about the potential for "political fallout" from the Beale investigation? If so, please identify these individuals and your impressions of their concerns.

e. Were any of your actions in the investigation of Beale's misconduct shaped by the potential for "political fallout"?

f. Why did you tell the OIG that the only "political fallout would have been during [your] confirmation hearing"? Were you concerned that Beale would be an obstacle to your confirmation as EPA Administrator?

8. During the hearing, you challenged my criticism of Beale being allowed to retire by noting that "every employee has their right to retirement" and that you are "sure he exercised that right."

   a. Did you have cause to fire Beale in April 2013?

   b. Did Mr. Beale have a "right" to retire?

   c. Does every EPA employee facing potential discipline and/or termination have the "right" to retire with full benefits first?

9. During the hearing, you also challenged my criticism of Beale being allowed to retire by noting that he is currently in federal prison. This suggests that you view prosecution by the Department of Justice as a sufficient substitute for adequate internal EPA controls and actions. Is that an accurate reflection of your views?

10. How many EPA employees have been terminated during your tenure as Administrator? How many employees within the Office of Air and Radiation were terminated during your time as Assistant Administrator?

11. During the hearing, you responded to a question from Senator Whitehouse by describing Beale as an outlier who is not representative of the EPA workforce. Nevertheless, you told the OIG that "Beale 'walked on water at EPA' due to his work on the [Clean Air Act] and other policy issues in the early 1990s." Furthermore, during your time as his direct supervisor as Assistant Administrator, you effusively praised Beale in emails to the entire Office of Air and Radiation. Additionally, even as Beale was sentenced to 32 months in federal prison for his crimes, he was offered strong support from a number of current and former senior EPA employees. They submitted letters, which went much further than calling him "a good man." Indeed, they called him a "tower of fortitude" and a man whom they still "respected . . . immensely." One former colleague even said that "John is still one of the five people I would speed dial for help." How do you reconcile your claim that Beale was an outsider and not representative of the employees at

EPA within the Office of Air and Radiation, with the praise offered by senior EPA officials on Beale's behalf even after he was exposed?

12. As Assistant Administrator for OAR, you sent multiple staff-wide emails praising Beale's performance. In one email you referred to his frequent absences from work and stated "we are keeping him well hidden so he won't get scooped away from OAR anytime soon." Yet, you told the OIG that you had suspicions over Beale from the moment you started at EPA.

    a. Why did you believe he was such an exemplary employee?

    b. Why didn't you take any meaningful action on your suspicions?

    c. In light of your professed concerns over Beale from the moment you started at EPA, did you worry about the kind of example Beale set for other EPA employees?

13. What verification mechanisms exist to ensure that employees do not continue collecting paychecks after they stop working?

14. How many cases of suspected time and attendance fraud have you been made aware of during your tenure as Administrator? How many suspected instances have been referred to you from an external source, and how many were discovered by you and those you supervise?

15. How many cases of suspected time and attendance fraud had you been made aware of during your tenure as Assistant Administrator for the Office of Air and Radiation? How many suspected instances have been referred to you from an external source, and how many were discovered by you and those you supervise?

16. Beale spent hundreds of thousands of taxpayer dollars on excessive travel. Yet, EPA employees signed off on his erroneous travel vouchers because they thought he was "special."

    a. How much money does EPA spend on travel?

    b. Is there really a different standard for certain EPA employees' travel?

    c. Who else is "special" at the EPA that can get away with this?

17. What is the process by which time and attendance problems are dealt with?

18. As an organization, would you characterize the EPA as having a culture that values attention to proper time and attendance keeping?

19. According to the Corrective Action Report of December 2013, EPA is migrating to a new payroll system in 2014. Please describe this new system. What features does it offer over the current system? Is the transition on schedule? How much did it cost?

20. According to the Corrective Action Report of December 2013, "Currently, the EPA is implementing a policy of "default pay" and "mass approval," where an employee will be paid for a full 80 hours over a pay period even if one step of the process fails to occur." Please explain the rationale behind this policy and how long has it been in effect.

21. According to the Corrective Action Report of December 2013, "the EPA also amended its time and attendance policy on June 20, 2013, and is currently engaged in negotiations with the agency's unions over the revised policy." Please detail the status of these negotiations.

22. According to the Corrective Action Report of December 2013, EPA said that it "expects to complete its review" of executive payroll approvals, employee departures and payroll, statutory pay limits, parking and transit subsidy, retention incentives, travel other than coach class travel, travel reimbursements above the government rate, and executive travel approval. According to this report, the reviews were supposed to be finished within 4 to 12 weeks. What is the status of each?

23. According to the Corrective Action Report of December 2013, no EPA employees were then receiving a retention incentive. Is this still the case? When was there a major reduction in the number of people receiving them? Are they still available?

24. According to the Corrective Action Report of December 2013, "regulations also provide agencies with the ability to request a waiver from OPM of these caps up to 50% of an employee's salary." Are you aware of instances where an EPA employee exceeded the cap by 50%? What is the largest waiver you have encountered?

25. How many EPA employees are currently receiving salaries that are above the statutory cap and require a waiver?

26. Please identify the position of every employee of the EPA who has exceeded the statutory pay cap during your tenure as Administrator, indicate by how much that employee exceeded the salary cap, and whether that employee received a proper waiver to do so.

27. Please identify the position of every employee of the Office of Air and Radiation who exceeded the statutory pay cap during your tenure as Assistant Administrator. Please also indicate by how much that employee exceeded the salary cap, and whether that employee received a proper waiver to do so.

28. How many EPA employees have received subsidized parking during your tenure as Administrator? Please provide as specific of an answer or estimate as possible.

29. How many Office of Air and Radiation employees received subsidized parking during your tenure as Assistant Administrator? Please provide as specific of an answer or estimate as possible.

30. On March 19 of this year, the Committee's minority staff published a 67-page report entitled ***EPA's Playbook Unveiled: A Story of Fraud, Deceit, and Secret Science***, which documents how Beale coordinated abusive tactics in the rulemaking process behind the 1997 Ozone and Particulate Matter National Ambient Air Quality Standards and how the EPA adopted this system that he pioneered in numerous subsequent air quality regulations. In news reports, EPA representative Alisha Johnson downplayed Beale's role: "While Mr. Beale did work on the rules mentioned in the report, he was just one of a large number of people from a number of disciplines across the Agency who provided input on those rules."

    a. Is it not true, though, that Beale's bonuses and promotions were based in large part on his "key role" on one of the "most significant issues he managed": the 1997 Ozone and Particulate Matter NAAQS?

b. Is it not true that in a staff wide email sent on December 3, 2010, you praised Beale for his "leading role" in the 1997 NAAQS review?

c. In light of these incontrovertible facts, why is EPA now downplaying the role that even you claimed he had in setting the 1997 NAAQS?

31. In EPA's justification for its proposed FY 2015 budget, the Agency requests Congress extend its authority under Title 42 to hire individuals to science and research positions at salary levels above the general service employee pay limit.

a. Please list the employees who were hired under Title 42?

b. What is the salary range for current EPA employees hired under Title 42?

32. In EPA's justification for its proposed FY 2015 budget, the Agency requests Congress remove the ceiling under Title 42, which limits the hiring of 50 persons to science and research positions at salary levels above the general service employee pay limit.

a. How many persons would EPA hire under Title 42 if there was no ceiling?

b. What area of science and research does EPA need more employees under Title 42?

Topic: CASAC

33. From March 25-27, 2014, the Clean Air Scientific Advisory Committee (CASAC) ozone review panel met to review national ambient air quality standards for ozone. The composition of CASAC is not only critical to the impending ozone standards, but in the context of EPA's proposed FY 2015 budget, it is critical given the massive amount of federal research grants these panelists have received to produce work they are reviewing as CASAC panelist, essentially creating a scientific revolving door. Yet, the Agency has continued to deny public access to the underlying science at the same time it continues to issue more grants to the same researchers.

a. In light of these facts, are you aware that 75% (15 out of 20) of the CASAC ozone review panelists have received EPA research grants?

b. Are you aware that those 15 panelists have received over $180.8 million in EPA research grants?

c. Is this a conflict of interest? If not, why not?

34. In our private discussions prior to your nomination you stated that "legitimate scientists" would be provided access to underlying data. How does the agency define a "legitimate scientist" and "legitimate scientific inquiry?"

Topic: White House Interference with Congress

35. On June 13, 2013, Kevin Minoli, Acting General Counsel, sent the White House an email asking for permission to release 106 emails to Chairman Issa and Ranking Member Vitter. These 106 emails were also subject to Ranking Member Vitter's negotiations over your confirmation as EPA Administrator. The EPA did not turn over these documents, and only did so AFTER Congress

subpoenaed the documents. Accordingly, it appears that the White House acted to obstruct a Congressional investigation. Since the discovery of this email, Chairman Issa has issued a subpoena for all documents in EPA's possession that relate to this obstruction.

a. Ms. McCarthy, according to an email obtained by the Committee – it appears that EPA sought White House permission to release 106 documents to me and Chairman Issa last June. EPA did not release these documents until Issa issued a subpoena in September 2013. Did the White House ever instruct you or EPA official to withhold these documents from Congress?

b. Is it common practice for EPA to seek the White House's permission to respond to a Congressional request, even when White House equities are not involved?

c. Did EPA do so in this case?

d. Why did EPA refuse to turn over the documents in question until a subpoena had been issued?

e. Why has EPA not complied with the most recent subpoena for documents relating to White House interference with a Congressional Investigation?

Topic: New Source Performance Standards (NSPS)

36. When EPA evaluated whether the cost of electricity from a new power plant using CCS is reasonable, did EPA rely on the cost of the technology at its current status as an emerging technology for power plants or did EPA look at what the costs are projected to be when CCS reaches the status of a fully mature technology?

    a. What are the differences in cost between CCS in its current status and when it reaches status as a fully mature technology?

    b. Has the Department of Energy shared with EPA how long before CCS is considered a fully mature technology and cost competitive for power plants?

    c. Mr. Julio Friedmann, Deputy Assistant Secretary at the Department of Energy is an expert in CCS technologies. He recently testified that early stage deployment of CCS for new power plants would increase the costs of wholesale electricity by approximately "70 to 80 percent." Does EPA dispute the validity of this statement?

37. In the proposed New Source Performance Standard rule for new electricity plants, EPA states that the standard it set for a new natural gas combined cycle power plant (1000 pounds of CO2 per megawatt hour) is being met by over 90% of those types of plants in operation today. How many coal fired power plants in operation today can meet the proposed standard (1100 pounds of CO2 per megawatt hour) for new coal power plants?

38. In previous EPA testimony, the Agency says the proposed standards for a new coal power plant "reflect the *demonstrated performance* of efficient, low carbon technologies that are currently being used today."

    a. Are there any full scale coal power plants currently operating in the US that are using fully integrated CCS technology?

b. Are there any electricity generating plants using CCS components in a FULLY INTEGRATED system (not gasification or EOR systems)?

c. If not, how can EPA select a standard without knowing whether it is achievable in practice?

Topic: Social Cost of Carbon

39. How many EPA full-time equivalent (FTE) hours were dedicated to the Interagency Working Group that developed the 2013 social cost of carbon estimates?

40. How much (in dollar amount) of EPA's FY2014 appropriations were dedicated to the Interagency Working Group's 2013 social cost of carbon estimates, including the Office of Air and Radiation's Office of Atmospheric Program's "technical work and the modeling" for the estimates?

41. Do you believe it is appropriate for the EPA to enter into formal consultation with USFWS to assess impacts on threatened and endangered species from major regulations under the Clean Air Act? As you are aware, EPA consults with the USFWS under the 316(b) cooling water intake rule, so why not allow such consultation for greenhouse gas regulations that could have land use impacts with far greater consequence?

    a. Do you disagree with the Director Ashe of US Fish and Wildlife Service, who said you are obligated to consult with USFWS?

    b. What arguments have you given to Director Ashe as to why you are not obligated to do so?

Topic: EPA's TSCA Budget

42. The President's FY2015 Budget justification indicates that the Agency will realign $23 million to focus on several priorities, including implementation of the President's Executive Order on Chemical Safety (E.O. 13650). In a reference to the realignment of funds to address air toxics work, EPA stated the following:

> In the agency's chemical safety program, realignments will be used to develop and release 19 draft chemical risk assessments and complete 10 final chemical risk assessments. These actions are critical in achieving the agency's long-term chemical safety goals.

Are the chemical risk assessments referred to in the Budget proposal the same assessments yet to be completed under the Work Plan Chemical program?

43. I believe EPA has completed five draft chemical assessments under the Work Plan Chemical program to date.

    a. When will the first five assessments be made final?

b. Do you agree that the Work Plan assessments are a possible model for the Agency's work under a reformed Toxic Substances Control Act?

c. The Agency reviewed some 1,200 chemicals in prioritizing 83 substances for the Work Plan Chemicals program. Is it your opinion that the Agency has the expertise and capability to prioritize substances in commerce, for further review and assessment, relatively quickly and efficiently?

d. The Work Plan Chemicals assessments are intended to identify where additional regulation might be necessary with respect to a particular substance. In the first five draft Work Plan chemical assessments, have any additional regulatory needs been identified?

e. How does the Agency intend to address those identified needs – what regulatory measures will the Agency take on those substances?

44. The FY2015 Budget proposal includes funding for implementing EPA's various chemical and pesticide safety programs under a broad category called "Ensuring the Safety of Chemicals and Preventing Pollution Prevention." The Agency proposes an increase of $42.5 million for that category for FY2015, with $40.5 million of that increase targeted at chemical safety programs. I'd like to have a better understanding of what that $40 million increase will be used for.

a. Under the FY14 budget, the Agency's TSCA program was budgeted at $62.7 million, split between $48 million for existing chemicals management and $14 million for new chemicals. So the FY15 budget suggests no increase for management of the Toxic Substances Control Act over FY2014. Is that correct?

b. Since the $40 million increase is not going to TSCA implementation, what will the funding increase support?

c. The FY14 Budget justification indicated that implementation of all of the Agency's existing TSCA authorities were a priority objective. Do you agree that TSCA implementation continues to be a priority for EPA?

d. Can you outline for me what the Agency accomplished in FY14 in fully implementing its existing TSCA authority?

45. The FY15 Budget justification indicates that there are more than 22,000 CBI claims in health and safety studies as of 2010. Since that time, the Agency has been working to address those claims in the CBI Challenge Program, in which you challenged companies to review and address their claims.

a. Does EPA still contend there were 22,000 CBI claims in health and safety studies now?

b. Since the Challenge program was begun, some 16,291 cases were reviewed. Is that correct?

c. Of those 16,291 cases, 12,043 had no CBI at all. Is that correct?

d. Would you agree that EPA wrongly classified some CBI claims when in fact there were not CBI claims made? In other words, didn't the 22,000 figure erroneously cite the number of CBI claims made with respect to health and safety studies?

e. What was the cause of this significant error?

f. Would you agree that the perception that industry made excessive CBI claims is in error, and not borne out by the facts?

g. I understand that of the roughly 10,000 cases that in fact had CBI claims, some 3,349 were allowed, 909 have been declassified, and about 7,200 remain to be reviewed. Is that correct?

h. Would you consider the CBI Challenge program a success? What is the Agency doing to make clear that there was a significant error in the number of reported CBI claims, and to more closely track the actual number of claims made?

Topic: Hydraulic Fracturing

46. I am very concerned that the hydraulic fracturing study that EPA has been working on for over four years has gone beyond Congressional intent and has inappropriately expanded in scope. The request to EPA in the FY 2010 appropriations report was for EPA to study any link between hydraulic fracturing and drinking water. Yet four years later, despite serious concerns about how EPA is conducting this study, I understand the agency is now embarking on several new research areas and may have 30 or more separate reports steaming from this study. The agency seems to be studying every water issue related to oil and gas development.

    a. What justification does the Agency have for going well beyond the Congressionally mandated scope?

    b. What is the current timeline to issue the study?

    c. What are current total EPA costs to date of this study?

    d. What do you expect to be the total costs of the study once it is completed?

    e. What is the status of EPA's prospective case studies?

47. I am also concerned that this study will be released publicly before there is a peer review by the Science Advisory Board. It is my understanding that EPA plans to release the study to the public at the same time it is submitted for peer review, which is unacceptable and similar to the Agency's actions in their less than credible Pavillion, Wyoming investigation.

    a. Isn't this poor process setting the Agency up again for a situation in which EPA may have to back track on findings after the initial draft is peer reviewed?

    b. This type of timeline has been used successfully by the EPA to scare and mislead the public with draft findings which are later debunked or never peer reviewed at all. Isn't this sort of timetable and procedure contrary to the goals of releasing a credible study or one that meets HISA requirements?

    c. Given the struggles of EPA's previous investigations into hydraulic fracturing and the Agencies severely damaged credibility in this arena, how are you planning on ensuring the scientific validity of this current study?

d. How is EPA planning on ensuring that any and all information disseminated to the public as a possible conclusion is properly vetted and peer reviewed if it is releasing conclusions prior to review by the SAB?

48. The Agency has indicated that they will not do a risk assessment to put all this information into some actual context.

    a. Why does EPA refuse to conduct a risk assessment as part of the study?

    b. Does the Agency plan on putting any of the study's findings or conclusions into context? If so how?

49. You've said that hydraulic fracturing can be done safely and have agreed with former EPA Administrator Lisa Jackson that there have been no confirmed cases of hydraulic fracturing impacting drinking water. What is your vision for getting the American public to understand that hydraulic fracturing is safe and that fracking has unlocked an American energy revolution that has lowered all Americans' energy prices, created jobs, helping lower GHG emissions and revitalizing such industries as the manufacturing, steel and chemical sectors?

50. The DOE and USGS have known experience conducting drilling and water sampling studies in the field. Specifically, DOE's NETL is doing a study in PA's Greene and Washington counties to assess the environmental effects of shale gas production and a July 2013 press release issued by NETL stated that "while nothing of concern has been found thus far, the results are far too preliminary to make any firm claims. We expect a final report on the results by the end of the calendar year."

    a. Are you aware of this study?

    b. Are you asking that DOE share this type of work and can you use this study in the larger EPA water study?

    c. Specifically, would the EPA benefit from the DOE's and USGS's expertise in these issues as part of the EPA's larger water study which continues to drag along and clearly demonstrates that the EPA's taken on more than it can chew?

51. Last June, ORD announced it would abandon its flawed drinking water investigation in Pavillion, WY and would instead support a further investigation by the State of Wyoming

    a. Given the flawed science on display by the agency at Pavillion and ORD's withdrawal, will you exclude the agency's work and data prior to June 2013 from the agency's Congressionally-requested study on the relationship between hydraulic fracturing and drinking water? If not, why not?

    b. ORD abandoned its investigation, yet according to agency statements, continues to "stand[] behind its work and data." How can the agency reconcile these directly contradictory actions? How would you explain to the American people that continuing a flawed investigation is not worth taxpayer resources, yet the agency "stands behind" the work and data that it abandoned?

52. In February the EPA's IG sent a memo to the EPA Office of Water outlining an initiative the IG has underway that will "determine and evaluate what regulatory authority is available to the EPA and states, identify potential threats to water resources from hydraulic fracturing, and evaluate the EPA's and states' responses to them." Do you consider this a duplication of the EPA's efforts as it relates to the multi-year and multi-million dollar hydraulic fracturing and water study currently in process at the EPA and if not, then how do these studies differ? Hasn't EPA independently done this type of evaluation?

Topic: Water Connectivity Study:

53. EPA recently released a notice of proposed rulemaking that would constitute the greatest expansion of federal control over land and water resources in the 42-year history of the Clean Water Act (CWA). The "Kennedy test" in the *Rapanos* Supreme Court decision calls for the finding of a "significant nexus" between waters for the assertion of federal jurisdiction. The EPA Office of Water asked the Office of Research and Development to conduct a Connectivity Study to help inform the Agency's regulatory policy decisions. If EPA intended for the science to inform policy decisions, the regulatory process should not have been initiated until the Connectivity Study was completed, along with a robust peer review of the study. That did not happen. In addition, the Connectivity Study is fundamentally flawed since there was no definitional finding of what constitutes a "significant" connection.

    a. Do you believe it is important that the "waters of the United States" regulation be based on sound science? If so, how can you justify moving forward with the expansion of the scope of "waters of the United States" before the Connectivity Study is completed and has undergone peer review?

Topic: Economic Impacts:

54. In performing the cost-benefit analysis required for development of the proposed regulation, why did you choose to use the permitting numbers from 2010 as your baseline? As you know, due to the economic recession occurring at the time, there were scarcely any construction activities initiated during that year and the numbers were deflated. In addition, why did EPA only examine the cost impacts under Section 404 and not for other CWA programs?

55. The economic analysis completed by the agency predicts that only 2.7% more waters will be made federally jurisdictional by the proposed "waters of the United States" rule. As you know, the analysis – including the 2.7% figure – has been severely criticized by credible economists and is likely to be underestimating the potential impact of the rule. Given the outstanding concerns with the analysis, can you explain why the agency did not wait to go forward with a proposed rule until the agency had addressed these concerns and produced a credible economic analysis to inform the public?

56. David Sunding, Ph.D., recently reviewed EPA's economic analysis associated with the proposed "waters of the United States" rule and concluded that the errors and omissions in EPA's study are incredibly severe and may render it essentially meaningless. To address these issues Dr. Sunding recommended that the agency withdraw the economic analysis and prepare an adequate study for this major change in the implementation of the CWA. Would you be willing to withdraw this flawed economic analysis and develop a new analysis addressing these concerns?

57. I understand that when assessing the potential economic costs and benefits of EPA's proposed "waters of the United States" rule the agency omitted analysis of certain key programs that will

undoubtedly be impacted by the rule. The agency provides no analysis for costs related to: the development of state water quality standards, monitoring and assessment of water quality, total maximum daily load development, and the entire industrial wastewater NPDES permitting program. In addition, EPA based its abbreviated assessment of impacts on the 311 spill program on "anecdotal" evidence. Can you explain why the EPA omitted or provided very little analysis of these key programs?

58. The EPA certified that this proposed rule will "not have a significant impact" on small businesses and communities. However, the agency did not gather significant feedback from those impacted prior to the rule being proposed. According to the U.S. Chamber of Commerce, it takes up to 12 months and costs hundreds of thousands of dollars to obtain a wetlands permit. Are you able to assure this committee that the costs and timelines associated with permit reviews will not be extended by this change in jurisdictional definition?

59. The cost benefit analysis supporting the "waters of the United States" proposal contains numerous deficiencies. According to the National Stone, Sand and Gravel Association the increased mitigation costs for just one site can be $100,000 or more under the new rule. With over 10,000 of these facilities in the US and dozens of industries affected, the costs of this rule have been drastically underestimated. While these deficiencies have been pointed out to EPA and the Corps, the very low estimates are still repeated by EPA and Corps officials. Does the EPA have plans to revise the cost benefit study to address these legitimate concerns?

60. As you know, there are several new definitions and concepts contained in the proposed "waters of the United States" rule. As a result, there is a distinct possibility that agencies will have to spend more money determining how to actually implement this rule. There is also a strong likelihood that other agencies' programs will be impacted given the broad scope of this proposed rule.

    a. Has EPA consulted with other federal agencies that have administrative responsibilities under the Clean Water Act?

    b. Has EPA considered the costs that the EPA and the Corps will incur, without considering other actors, in determining how this rule will be implemented?

    c. Does EPA know how other agencies will interpret this rule, and whether other agencies will require additional resources in order to understand how their ability to administer their own programs might be affected?

Topic: Clean Water Act Permitting:

61. In light of EPA's recent actions concerning Pebble Mine and Spruce Mine, the regulated community is understandably concerned about the lack of certainty currently surrounding the Section 404 permitting process. How does EPA intend to address these concerns and ensure that the regulated community can have their projects fairly considered, and can rely on their permits once they are issued? Would you agree that finality is an important consideration for permits?

62. According to EPA, the agency initiated the Bristol Bay Watershed Assessment in response to a petition for EPA to exercise its CWA Section 404(c) authority. Has the agency received any other similar petitions, and if so what has been requested? Has the agency received any petitions concerning the agency's use of Section 404(c) on any existing permits?

63. Does EPA have any plans to potentially perform studies on or initiate the 404(c) process on any other waters at this time? If so, where?

64. Does EPA have any plans to potentially reevaluate any existing 404 permits pursuant to its claimed 404(c) authority? If so, which ones?

65. Has the EPA evaluated the consequence of its actions with respect to Bristol Bay and Spruce Mine and the impact the uncertainty will have on investment in natural resource development?

66. Could regulatory uncertainty over Section 404 permits drive away investment at the cost of American jobs? Has the EPA studied this issue?

67. Many states have primacy over their Surface Mining Control and Reclamation Act (SMCRA) permitting programs, and as such many states expend a great deal of time and resources in the mine permitting process. What effect would a lack of finality in CWA Section 404 permits have on state SMCRA permitting scheme?

68. The President, in executive orders and public statements, has said that streamlining the permitting process for energy projects – particularly those necessary to support renewable energy projects – is a high priority for his Administration. As you know, individual permits by definition take longer to get approved. Due to the proposed rulemaking, it's likely that more individual federal permits will be required, especially for energy projects. Where a federal permit is required, other federal requirements are also imposed (NEPA, potential ESA consultations, historic preservation review, tribal consultations, and citizen suit enforcement), thus lengthening the processing time. Can you explain how this outcome is consistent with the President's streamlining objective?

69. While the Administration has committed to streamlining and expediting permitting for major infrastructure projects that advance energy (e.g., Executive order 13604, Blueprint for a Secure Energy Future), there is some concern that this proposed rulemaking will have the opposite effect. This is because EPA's proposed rule creates new sub-categories of water that could be subject to federal jurisdiction, preempts states' rights to regulate internal waters traditionally regulated only by the states, and creates a cumbersome review process for determining which waters are jurisdictional under the new definition of "waters of the United States."

    a. Can EPA guarantee that this rule will not further delay permitting for energy infrastructure projects?

    b. Has EPA and the Army Corps considered the Administration's goals for energy development and infrastructure expansion in formulating this rule? If so, is that consideration discussed in the rule or elsewhere? Have the agencies requested comments on how this rule might impede the development of energy projects?

    c. In the cost benefits analysis for this rule, do the agencies consider any of the potential negative impacts that this rule could have on energy sector development such as: new delays in permitting projects, more cumbersome consultations between state and federal agencies, and more permits needed for the same projects?

<u>Topic: Fill Material:</u>

70. The current definition of fill material, finalized in May 2002, solidified decades of regulatory practice by unifying the Corps and EPA's prior conflicting definitions so as to be consistent with

each other and the structure of the CWA. However, both EPA and the Corps have stated that they are considering revising the definition of fill material. These changes could mean that certain mining-related activities would be deemed illegal, thereby preventing mining companies from operating. The FY 2014 Omnibus appropriations bill included language to prevent the Corps form working on any regulation that would change the definition of fill material.

a. Has EPA engaged in discussions with the Corps on revising the rule?

b. What is EPA's rationale for potentially revisiting the well-established division of the Sections 402 and 404 programs?

c. What specific problems is EPA seeking to address by revisiting the definition of fill material, and how exactly is EPA intending to address them?

Topic: Chemicals:

71. In the EPA's proposed FY 2015 budget, the agency is requesting "$23 million in FY 2015 to support activities under the President's executive order on chemical safety, as well as Agency efforts on chemical prioritization, air toxics, radon, and volatile organic compounds in drinking water.

a. Can you provide more specific information on the projects this funding will go towards?

b. Do you agree that we need to improve the Local Emergency Planning Commission (LEPCs) program and Emergency Planning & Community Right-To-Know Act (EPCRA) reporting system?

c. Will this funding go towards the development of new technology such as a mobile app version of the CAMEO system and the development of a web-based version of EPCRA Tier II submission to facilitate a more accurate and complete hazardous materials reporting system? Such improvements will allow local first responders to prioritize the hazards they may face at the facility.

72. In the case of the West, Texas fertilizer facility tragedy that occurred on April 17, 2013, it appears that the facility was not compliant with a number of existing regulations and industry standards. Do you agree that had existing regulatory requirements and industry standards been fully implemented by West Fertilizer this tragic accident would not have happened?

73. Do you agree that we need to improve the Local Emergency Planning Commission (LEPCs) program and Emergency Planning & Community Right-To-Know Act (EPCRA) reporting system?

a. What would EPA recommend to improve and enhance education / training / emergency response efforts between chemical facilities and their local LEPC and first responders?

b. Do you agree that the main issue related to the West Fertilizer tragedy was a storage issue, not an air release issue?

74. The EPA Risk Management Program (RMP) was authorized by Congress in the "Clean Air Act Amendments of 1990" following the Bhopal, India accident in 1984. In previous EPA testimony before Congress, the agency stated that the "goal of the EPA's Risk Management Program is to prevent accidental releases of substances to the air that can cause serious harm to the public and

the environment from short-term exposures, and to mitigate the severity of releases that do occur."

a. Is this still the goal of the agency?

b. How does EPA define short-term exposure?

c. Is this consistent with past EPA interpretations?

d. Do you agree there are statutory factors the agency needs to consider when adding any hazardous substances to the RMP list? If yes, could you list the factors EPA is required to consider?

e. Would you agree that a product such as solid fertilizer grade ammonium nitrate was never intended to be part of the EPA RMP program as the focus of the program is to address accidental toxic releases into the air from a hazardous gas or liquid?

75. The U.S. chemical industry is one of the most regulated industries in the world and data shows that the industry is one of the safest. This is due to an existing set of safety and security laws, regulations and voluntary programs. Do you agree that EPA should focus its time and resources on increasing training, outreach and education efforts to the regulated community in order to help with compliance assistance and focus enforcement on companies with a history of noncompliance?

Senator Roger F. Wicker

1. I was disappointed to see that you are proposing eliminating funding for beach monitoring grants under the BEACH Act. These programs are vital to over 35 coastal communities, including my home state of Mississippi. These funds help support water quality and public notification systems.

   What is the EPA's rationale for eliminating funding for the beach monitoring grant program in the 2015 budget request?

Furthermore, I would like to know more about the Clean Water Act and Clean Air Act.

2. What percentage of local communities are currently in compliance with EPA requirements under the Clean Water Act and the Clean Air Act respectively?

3. How many Voluntary Consent Agreements, or other similar judicial device, has the EPA entered into regarding the Clean Water Act and the Clean Air Act?

4. What has been the financial impact of those agreements on local communities?

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Following up with questions from the hearing regarding EPA's Clean Air section 105 air quality management categorical grant program, I would like to ask the following questions.

5. What is the allocation formula for the State Air Grants based on?

6. When the allocation formula was first implemented, what was the distribution of funds to EPA regions?

7. What are the projected changes in the distribution of funds for EPA regions after the new allocation formula is implemented?

Senator Deb Fischer

1. The EPA has issued a number of new regulations regarding emissions from electric generating units. What is the EPA's ultimate goal? Is the EPA trying to force utilities to take coal-fired power plants out of operation?

2. Is it fair to say that EPA would like to see the U.S. lessen its dependence on coal for electricity production?

3. The EPA will soon be announcing new proposed regulations regarding greenhouse gas emissions from existing power plants. Do commercially available technologies currently exist to capture and store carbon emissions at power plants?

    a. If yes, where? At what cost? Will vendors be able to deal with the demand created by the regulations?

4. The power sector has announced the retirement of over 60 giga-watts of coal fired generation. This amounts to about 20 percent of the existing coal-fired generating capacity in the United States. These retirements will generally occur before 2020, with a great majority of the retirements occurring by the 2016 Mercury and Air Toxics Standards ("MATS") deadline. This loss of coal fired capacity is likely to continue due to a new EPA rules, including the new CO2 regulations for existing power plants, regulation of coal ash, and regional/local control measures required to attain the more stringent ozone and fine PM2.5 standards. Furthermore, electric reliability problems posed by the continued loss of coal fired capacity could be exacerbated by the retirement of baseload nuclear generation. According to a recent white paper by Senator Murkowski: "Just last year four nuclear reactors were closed, and a fifth unit is scheduled to close in 2014. Two of these facilities ... cited economic reasons as the basis for their closures even though the facilities received license renewals."[1] The power sector faces major challenges as to how it will replace a large amount of coal and nuclear baseload capacity. Please explain on how the Agency intends to address this issue with regards to the upcoming section 111(d) rule, including the steps it plans to take to ensure the reliability of the grid.

5. Given that efficiency improvements will be critical for lowering CO2 emissions from power plant under any future section 111(d) rule, what the agency is doing to remove the existing regulatory barriers to completing such efficiency improvement measures under the New Source Review program?

6. In the proposed rule, EPA makes its "adequately demonstrated" determination predominantly based on CCS demonstration projects that have received federal assistance under the Energy Policy Act of 2005 (EPAct05). Notably, three of the four commercial scale CCS demonstration relied on by EPA have all been allocated an investment tax credit that was established for "clean coal facilities" under section 1307 of EPAct05. However, Congress has placed specific limitations on EPA's authority to set section 111 standards based on demonstration projects that receive federal assistance under these EPAct05 programs. Specifically, these statutory limitations expressly bar EPA from considering the three commercial-scale CCS demonstration projects in making a determination under section 111 that CCS is adequately demonstrated. Please explain why the Agency is ignoring this statutory limitation in the pending NSPS rulemaking.

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[1] See Murkowski White Paper at page 9, footnote 41.

7. EPA's proposed rule defining the term "waters of the United States" should allow stakeholders sufficient time to submit a robust and meaningful response to the proposal. Stakeholders need adequate time to develop analytical, technical, and economic information in response to the proposal. I understand that EPA and the Corps have taken years to develop a proposed rule. Will you commit to providing the public no less than 180 days for public comment?

8. In the proposal of the rule redefining "waters of the United States," ditches are now considered to be part of the definition of a "tributary," which make them now come under federal jurisdiction, no "significant nexus" analysis even needed. How many ditches are now going to be a "water of the U.S." under this rule? We have a lot of ditches in my part of the country and if EPA is in the game of regulating them, farmers and ranchers are going to be pretty upset. The agriculture exemptions are not enough, farmers and ranchers are still going to have to get NPDES permits and 404 permits for things like spraying fields and pastures near ditches and ponds.

9. How many more farms will need an SPCC plan based on the proposed rule? Will more livestock operations need 402 NPDES permits under this rule? Will more landowners need 404 permits?

10. EPA proposed a rule to redefine a "water of the U.S." Is it true that, in looking at costs, EPA did not update 20 year-old studies for inflation? Did EPA analyze each program under the Clean Water Act and whether that program would be expanded with this change and by how much?

11. How long and how much money does it currently take on average to get a nationwide permit? Is it safe to say that increasing the number of waters under federal regulation, especially if you're including ditches, dry streams, and isolated ponds and puddles, will increase the average time it takes to get a permit and will increase the average cost to get a permit?

12. Can a third party sue me under the Clean Water Act if you have told me my dry streambed is not a "water of the U.S." in the form of a "jurisdictional determination" (JD) but that individual wants it to be?

13. What is the EPA's definition for "significant nexus"?

14. How do the states feel about you taking federal control over "all waters?" Have you left any waters under their control? Have you consulted them?

15. This proposal greatly expands the current definition of "waters of the U.S." under the Clean Water Act, opening them up to permitting requirements for ponds, ditches, and even dry streambeds that only hold water when there is a rainfall event. How do you explain to the agriculture community what the agency is doing?

16. Does this rule increase the number of "waters" that could come under federal jurisdiction? Industry, unanimously believes the answer is yes. Doesn't it logically follow that if more waters are jurisdictional more permits will be required?

17. Administrator, you said the proposal will provide clarity. However, it is 371 pages long. If a landowner wants to know whether waters on his property will require a federal permit do you think he will be "clear" about that after he reads a 300+ page document? Is it your purpose to write a regulation so broad and vague that EPA is saying that "every water is now under federal jurisdiction?" I do not believe this is the kind of clarity landowners is asking for, or the Commerce Clause of the Constitution and the Clean Water Act allows.

18. Last November, the EPA proposed Renewable Fuel Standard targets for 2014 that would blend less fuel than we blended last year, impacting the economy in Nebraska. It does so using an approach that I find to be inconsistent with the law and previous regulations by inserting considerations about fuel delivery infrastructure into the annual target setting process. What steps is EPA taking to fix this proposed rule and respond to the hundreds of thousands of comments submitted for your consideration? When do you expect the final rule to be released?

19. EPA announced plans to change the pathway approval process for new biofuels – a definite step in the right direction to mitigate unnecessarily long delays and wait times for new biofuels producers. Unfortunately, whatever positive benefits might come out of this process have been negated by the Agency's simultaneous announcement that new applicants refrain from submitting applications for a 6-month period, until EPA's new guidance is released. Coupled with the EPA's 2014 proposed volume rule under the RFS, and an already slow pathway approval process, this action only further creates unneeded uncertainty.

20. Is it realistic to think that the EPA can get new guidance out in a 6 month period? Will this new process be subject to OMB review?

21. Why did the EPA include a pause on new applications during this window of time? Have you assessed the impact of this approach on investors and on the innovation pipeline for new biofuels?

22. Your announcement states that you will be setting priorities for processing while you are working on revisions to your approval process. Please provide the Committee with the list of applications that you will be processing and those that you will not during this period of time.

14-000-6909

**Questions Submitted for the Record by Senator Boxer**

**Question 1:** Given the importance of limiting carbon pollution and addressing climate change, increasing EPA's FY2015 Budget to address climate change is critical. Can you please explain how increased funding for the Agency's climate change work will ensure that state governments can efficiently implement and comply with any planned or existing Clean Air Act standard that establishes limits on carbon pollution from stationary sources?

**Answer:** The EPA's FY 2015 requested increase reflects funding for states to lay the ground work to support the President's Climate Action Plan and, in particular, activities associated with developing state plans to implement the carbon pollution guidelines for existing power plants. While state plans to address greenhouse gas emissions from the power sector are not due before 2016, FY 2015 will be an important year for states to build capacity and prepare for state plan development.

**Question 2:** The EPA's FY 2015 Budget supports implementation of the President's Climate Action Plan by calling for limits under the Clean Air Act on carbon pollution from cars, trucks, and power plants. Are these agency actions consistent with the Supreme Court decision in *Massachusetts v. EPA* (2007) and more recent decisions from the U.S. Court of Appeals for the D.C. Circuit?

**Answer:** The EPA's actions are consistent with the 2007 Supreme Court and U.S. Court of Appeals for the D.C. Circuit decisions.

**Question 3:** EPA's revolving loan programs for drinking and wastewater infrastructure help to ensure that the water we drink is safe and that our lakes and rivers are clean. EPA's budget request cuts funds for these important programs. Can you please explain how EPA will ensure adequate investments in clean water and drinking water are being made?

**Answer:** The FY 2015 budget request balances environmental protection with fiscal realities. This request supports the continued work of the State Revolving Fund (SRFs) in ensuring that small and underserved communities have access to funding that helps address their water infrastructure needs. Over the course of the life of the SRFs, approximately $130 billion in assistance has been provided to projects, from all sources, including federal, state match, net leveraged bond, repayment of loan principal, and others. Since FY 2009, over $22 billion in federal capitalization funding has been provided to the SRFs.

**Question 4:** The EPA has reported on the impressive and immediate health and environmental benefits of the National Diesel Emission Reduction Act Program, including significant reductions in air pollutants such as NOx and Particulate Matter. I am concerned that the EPA's budget asks to eliminate funding for this very successful program. Can you please explain how the Agency will make new gains in reducing air pollution from diesel engines and how the Agency will ensure continuing public health and environmental benefits from such air pollution reductions?

**Answer:** The EPA must make difficult choices to prioritize its activities. While the DERA grants accelerate the pace at which dirty engines are retired or retrofitted, pollution emissions from the legacy fleet will be reduced over time without additional DERA funding as portions of the fleet turnover and are replaced with new engines that meet modern emission standards. However, even with attrition through fleet turnover, approximately 1.5 million old diesel engines would still remain in use in 2030. Ongoing projects will continue to clean the air and support jobs during FY 2015, as the Agency continues to support and administer projects that have already received funding.

**Question 5:** The President's Executive Order on Chemical Safety directs the Federal Working Group to identify actions that will better protect people from hazards at chemical facilities. I recently held a hearing on the Executive Order and was concerned that the Working Group has identified few actions to improve oversight. I believe that we must move forward as rapidly as possible. Delay is unacceptable.

As a follow-up to the hearing, I asked the EPA witness to provide the Committee with a detailed explanation of how the Federal Working Group has met each of the required actions in the Executive Order and to provide the Committee with quarterly status updates on implementation of the Executive Order. Will you ensure that EPA responds to this request as soon as possible?

**Answer:** President Obama issued Executive Order (EO) 13650 - *Improving Chemical Facility Safety and Security* on August 1, 2013, to enhance the safety and security of chemical facilities and reduce risks associated with hazardous chemicals to facility workers and operators, communities, and responders. The Executive Order directed Federal departments and agencies to:

- Improve operational coordination with, and support to, State and local partners;
- Enhance Federal agency coordination and information sharing;
- Modernize policies, regulations, and standards; and
- Work with stakeholders to identify best practices.

On June 6, the Working Group's report to the President, entitled *Actions to Improve Chemical Facility Safety and Security – A Shared Commitment* was released. The report highlights activities undertaken to improve chemical facility safety and security and provides a consolidated plan of actions to further minimize chemical facility safety and security risks. The Working Group has implemented a number of actions since the release of the EO. A description of these actions can be found at: https://www.osha.gov/chemicalexecutiveorder/EO_Fact_Sheet_060514.pdf. Regarding periodic updates, EPA plans to continue to provide the Committee with regular updates on actions implemented under EO 13650.

**Question 6:** In December 2008, a devastating coal ash spill occurred in Kingston, Tennessee. More recently, an EPA-listed high hazard coal ash impoundment at a Duke Energy facility in North Carolina spilled into the Dan River threatening drinking water supplies down river from the facility. How will the Agency ensure that when it completes final rules concerning the disposal of coal ash later this year that there are adequate federal protections in place to protect communities near coal ash impoundments from this hazardous material?

**Answer:** The Agency is continuing to review and analyze more than 450,000 comments on the proposed Coal Combustion Residuals (CCR) rule. These comments raised a number of complex issues. In addition, EPA has solicited and received additional technical data. EPA continues to work to address these issues and will finalize the rule pending a full evaluation of all the information and comments received.

On May 2 of this year, a consent decree was entered, which establishes a deadline for EPA to take final action on the CCR proposed rule by December 19, 2014. The Agency plans to meet this deadline.

**Question 7:** EPA's Office of Inspector General recently completed an investigation of EPA's actions in the Parker County, Texas groundwater contamination case. OIG found that EPA acted appropriately when it issued an emergency order in that case, and when EPA lifted the order after the State agreed to investigate. However, OIG questioned the quality of data provided by Range Resources and whether residents in the community may still have unsafe drinking water. EPA agreed to take specific steps in response to the OIG's recommendation, including requesting additional information from Range Resources. Can you please provide an update on the status of EPA's implementation of the OIG's recommendations?

**Answer:** EPA has completed corrective actions addressing the Office of Inspector General's recommendations regarding the Range Resources matter. As part of these actions, the EPA requested, and Range Resources provided, additional quality assurance/quality control data associated with sampling undertaken by the company. The agency shared that data with the Texas Railroad Commission, the lead state agency charged with overseeing oil- and gas-related activities in Texas, on December 5, 2013, and at this time has not found any potentially significant data quality concerns. The EPA does not believe that the sampling data collected by Range Resources calls for further action by the EPA at this time.

**Question 8:** According to the Agency indoor radon is the nation's second leading cause of lung cancer and causes about 21,000 deaths each year. About one in 15 American homes contain high levels of radon. I am concerned that EPA's budget would cut funding for state and tribal grants to address this preventable cause of cancer. Can you please explain how the Agency will ensure that the public is properly protected from the threat of radon and how the public will have continued access to state and tribal programs that can assist them in reducing their risk of exposure to dangerous levels of radon?

**Answer:** Eliminating the State Indoor Radon Grants (SIRG) program is an example of the hard choices the Agency has made in this budget to help meet the nation's fiscal challenges. The Radon Program will continue to be a priority for the EPA and will continue to focus on radon risk reduction in homes and schools. The EPA will engage in public outreach and education activities, encourage radon risk reduction as a normal part of doing business in the real estate marketplace, promote local and state adoption of radon prevention standards in building codes, and participate in the development of national voluntary standards (e.g., mitigation and construction protocols) for adoption by states and the radon industry.

The EPA will drive action at the national level with other Federal agencies (through the Federal Radon Action Plan) to reduce radon risk in homes and schools using partnerships with the private sector and public health groups, information dissemination, participation in the development of codes and standards, and social marketing techniques. These actions are aimed at fixing homes and schools when radon levels are high and building new homes and schools with radon resistant features.

**Question 9:** I have been a strong supporter of EPA working to protect children's health from dangerous air and water pollution. EPA's budget increases environmental justice funding to improve environmental conditions in minority and low-income communities across the country and to enhance enforcement of clean air and other protections in at-risk communities, near schools and in other areas where children may be exposed to toxic pollution. Can you please describe how the Agency will use this budget request to strengthen environmental protections for these communities and enhance the environmental health of the country's most vulnerable populations?

**Answer:** The requested resources will deliver direct support and technical assistance to communities with environmental justice concerns and their partner organizations that are working to directly address the adverse environmental and public health issues impacting their residents. The emphasis will be on addressing the most vulnerable populations such as children and the elderly, and ensuring greater environmental protection and achieving visible differences in these communities. The request will also be used to increase outreach as well as collaboration and leveraging of resources between stakeholders (other federal agencies, state/local government, business, and NGOs) involved in community-based activities. This will include educating partners about aligning their community-based resources and investments while also supporting the capacity of these communities to address pollution problems.

These efforts also include further integration of the Agency's community-based efforts and investments (Tribal, Brownfields, Superfund, Air Toxics, Urban Waters/Green Infrastructure, and Sustainable Communities) in minority and low-income communities with environmental justice issues, to maximize community benefits and provide greater protection and tangible benefits as a result of these programs. For example, activities could include working with colleagues in other EPA offices to better align Agency brownfield site investments to include elements of green infrastructure which are also part of a community-focused area-wide planning initiative. Additionally, in past years, EJ assistance efforts to over 1,000 communities through various grant programs and technical assistance to approximately 30-40 communities through the Technical Assistance Services to Communities (TASC) contract, have enhanced their abilities to actively participate in decision making processes that affect their communities and broadened their skills and capacity to effect environmental changes such as remediation, clean up, education and research, the benefits of which is a healthier environment.

**Question 10:** In December 2013, in response to the OIG's Early Warning Reports in the John Beale fraud case, the EPA has taken a number of corrective actions to prevent future occurrences of such fraud. Can you please confirm your commitment to providing regular updates on the progress the Agency has made in addressing the issues raised in the OIG's report?

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**Answer:** Yes, the EPA is pleased to confirm its commitment to providing updates. At this time, we can report a prompt and proactive effort that has produced substantial progress. In December 2013, the EPA released the *Report of Evaluation and Corrective Actions* which identifies areas where the Agency was taking, has taken, or was considering taking corrective actions. In April 2014, the EPA completed a second, more thorough review of issues in its *Report on Internal Control Assessments of EPA's Sensitive Payment Areas*. This report used GAO-standard procedures[1] for assessing internal controls, looking at seven areas: executive payroll approvals; employee departures; statutory pay limits; parking and transit subsidies; retention incentives; travel reimbursements; and executive travel approval. This report was provided to the EPA's Inspector General on April 17, 2014. While work continues to implement and ensure ongoing compliance with corrective actions, the Agency is working aggressively to prevent future fraud. The Agency will be pleased to continue to report on future progress.

[1] http://www.gao.gov/greenbook/overview

**Questions Submitted for the Record by Senator Markey**

**Question 1:** It's been nearly 4 years since the Deepwater Horizon drilling rig sank into the Gulf of Mexico causing an environmental catastrophe at a magnitude never seen in this country. In our frantic response to the oil that was gushing into the Gulf we used unprecedented amounts of chemical dispersants over an extended period of time. We also applied these dispersants under the water, in a way they were never intended to be used. Concerns about the toxicity and environmental impacts of the primary chemical dispersant used, known as Corexit, led the EPA to announce that it would be doing additional research and would propose changes to the list of approved chemical dispersants and other remediation agents.

a. When can we expect that these changes will be published?

**Answer a:** EPA expects to publish proposed revisions to the regulatory requirements associated with dispersants in summer 2014.

b. Will these changes incorporate the results of the impacts of prolonged and/or subsurface use of dispersants?

**Answer b:** Yes, the changes will address prolonged and/or subsurface use of dispersants.

**Question 2:** The NPDES permit for the Pilgrim Nuclear Power Station has been administratively extended by EPA for almost 20 years. When will the EPA complete its work to update the permit in a comprehensive manner?

**Answer:** The EPA is working on developing a NPDES permit for the Pilgrim Nuclear Power Station with the goal of issuing a draft permit for public notice by the end of September 2014.

**Question 3:** In 2011, EPA granted a three-year exemption from regulation under the Clean Air Act for carbon emissions from bioenergy facilities. EPA then commissioned an expert panel of the Science Advisory Board to review the Agency's proposed bioenergy carbon accounting framework. They found that EPA's framework needed to account for the important ongoing role that forests play in sequestering atmospheric carbon dioxide and that we cannot automatically assume biomass energy is carbon neutral. Basically, you can't cut down a 150 year old forest, burn it, and assume there's no net carbon impacts. In 2012, my home state of Massachusetts published final carbon accounting regulations using a methodology very similar to those recommended by the Science Advisory Board. Does EPA plan to incorporate these key science-based recommendations into whatever new rules are established to govern carbon emissions from bioenergy?

**Answer:** As detailed in the President's Climate Action Plan, part of the strategy to address climate change will include fostering expansion of renewable resources and responsible forest

management. A science-based approach to considering biogenic $CO_2$ emissions is a priority for the EPA. While the technical and methodological considerations are complex, the Agency is continuing to explore an approach that is based on a variety of factors. We appreciate that stakeholders are interested in an approach which allows for consideration of the unique attributes of biogenic feedstocks (as compared to other feedstocks such as coal) as a way to provide certainty and flexibility in the permitting context. The EPA is considering the range of approaches, supported by the science, that provide such opportunities. Currently, the EPA is working on revisions to the 2011 Framework that respond to the Science Advisory Board's comments and also consider the latest scientific analyses. In addition to the technical analyses, the EPA is evaluating the policy and legal implications of the range of approaches.

**Questions Submitted for the Record by Senator Vitter**

**Topic: John Beale and Internal Controls**

**Question 1:** During the hearing, you attributed the time lapse between when you first learned of John Beale's illegal bonus and when you finally cancelled the bonus to "it taking a while to get to the bottom of the John Beale issue because he was a criminal that had systemically intended to defraud the agency." The January 12, 2011 memorandum you received from Scott Monroe detailed both how "EPA policy requires that OAR recertify the bonus annually and re-establish the bonus every three years" and how "EPA had no records to show that these recertifications occurred except for one in 2000."

**a.** Did it occur to you upon receipt of the January 12, 2011 memorandum that you had not ever signed annual certification paperwork for Beale's bonus despite having headed OAR at that point for a year and a half?

**Answer:** You are correct that during my time as Assistant Administrator of the Office of Air and Radiation, I did not recertify Mr. Beale's retention bonus. When I developed concerns about Mr. Beale's retention incentive I sought the assistance of senior managers responsible for human resources to review the incentive.

**Question 2:** On July 16, 2010, Scott Monroe sent Beth Craig an email which stated unequivocally, "Regardless of the circumstances surrounding overpayment, OAR must submit a request if we intend to continue the retention bonus."

**a.** The email indicates that in order for Beale to continue to receive his bonus, it must be affirmatively recertified. Is this an accurate statement of EPA policy?

**b.** Did your office recertify the retention bonus?

**c.** If you were aware that he was receiving his bonus in error, and that they bonus had not been recertified, why did EPA continue to pay Beale the unearned wages?

**Answer:** The EPA retention incentive policy set forth in EPA Pay Administration Manual 3155 TN (June 1991) requires an annual "recertification" of any retention incentive whether established for a period of one, two, or three years, to ensure the conditions under which the original incentive was granted are still valid. Unfortunately, as the Beale case illustrated, the annual recertification requirement was not well understood by requesting officials. The EPA has now implemented a number of internal controls and policy changes to ensure retention incentive pay justification and recertification requirements are clearly understood by requesting officials and receiving employees.

During my time as Assistant Administrator, the Office of Air and Radiation did not recertify Mr. Beale's retention bonus. When I developed concerns about Mr. Beale's retention incentive, I sought the assistance of senior managers responsible for human resources to review

the incentive. Under the circumstances, it was prudent to verify information before acting on it. Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture.

**Question 3:** The January 12, 2011 memorandum you received from Scott Monroe also noted that retention incentives require a showing that there exists a "'special agency need' to retain the employee's services" and a showing that the employee is "'likely to leave,"' a showing which requires a written offer for outside employment, both of which Monroe suggested that Beale "did not appear to meet." Despite these obvious shortcomings, you allowed more than two years to pass before cancelling the bonus in February of 2013. During this time, Mr. Beale collected more than $90,000 in unearned bonuses.

a. Why was further investigation before cancelling his bonus necessary when Scott Monroe had already demonstrated that the lack of necessary recertifications since 2000?

b. Why was further investigation before cancelling his bonus necessary when Scott Monroe had already indicated a lack of necessary documentation to meet the "likely to leave" requirement?

c. Given the high standard for receiving retention incentives, did you-as Mr. Beale's direct supervisor-believe that there existed a "'special agency need' to retain" Mr. Beale's services? If not, why was further investigation before cancelling his bonus necessary?

d. At the time you permitted the bonuses to continue, did you believe that Mr. Beale was "likely to leave" and had written evidence of outside job offers?

**Answer:** Neither OPM regulations nor EPA policy in place at the time required a written job offer to support a retention incentive. Having said that, I never authorized a retention incentive for Mr, Beale. Rather, when I developed concerns about Mr. Beale's retention incentive I sought the assistance of senior managers responsible for human resources to review the incentive. Under the circumstances, it was prudent to verify information before acting on it. While there was a delay in taking action, Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture.

**Question 4:** Despite the fact that you knew with certainty that the necessary criteria to receive a retention bonus had not been met two years before you took action to cancel the bonus, you had the audacity to assert the following: "What is true is I did pursue that issue [of Beale's illegal bonus] effectively, and I think the Agency was addressing it effectively."

a. Please provide your definition of "effective."

b. What would be an ineffective response to such clear warning signs?

**Answer:** When I developed concerns about Mr. Beale's retention incentive, I sought the assistance of senior managers responsible for human resources to review the incentive. Under the circumstances, it was prudent to verify information before acting on it. While there was a delay in taking action, Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture.

**Question 5:** What is the foundation of your claim that EPA responded to the issue of Beale's illegal bonus "effectively" when it was allowed to continue without the necessary recertification for more than a decade, during the last two years of which multiple officials were aware of its failure to meet multiple necessary criteria?

**Answer:** When I developed concerns about Mr. Beale's retention incentive, I sought the assistance of senior managers responsible for human resources to review the incentive. Under the circumstances, it was prudent to verify information before acting on it. While there was a delay in taking action, Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture.

**Question 6:** During the hearing, you responded to one of my questions ("Why, in early 2011 were you reluctant to finalize, to not cancel the bonus? Why were you reluctant to take action?") with the following response: "Actually, I understood that the issue was going to be referred to the Office of the Inspector General." According to the documents made available to the Committee, the first mention of even potentially referring the Beale matter to the OIG occurred only in spring of 2012.

a. Were you in fact aware of plans to refer the Beale matter to the OIG in 2011?

b. If so, please provide a detailed description of when and from whom you first heard of plans to refer Beale's compensation issues to the OIG, of whom you were aware had knowledge of the possibility that the Beale matter might be referred to the OIG, and of what you believed came of this plan to refer the matter to the OIG. Please also provide all documentation predating April 1, 2012 in your possession referring to Beale and the OIG in conjunction with each other.

c. If you incorrectly stated that you believed that the matter was to be referred to the IG, then why in fact were you reluctant to finalize the cancellation of Beale's bonus in early 2011?

**Answer:** When I developed concerns about Mr. Beale's retention incentive I sought the assistance of senior managers responsible for human resources to review the incentive. Similarly, I sought assistance when I became concerned about Mr. Beale's attendance record. Under the circumstances, it was prudent to verify information before acting on it. While there was a delay in taking action, Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture.

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**Question 7:** During the hearing, I quoted from an email produced to me by the OIG from Susan Smith, a Team Leader in the Executive Resources Division of the Office of Administration and Resource Management, to Karen Higginbotham, the Director of the Executive Resources Division. In the email, Ms. Smith attests to Ms. Higginbotham that "Scott Monroe stopped by ... and said .... that Gina is reluctant to finalize [the cancellation of Beale's retention incentive bonus] unless OARM (Craig) gives her the okay that the White House is aware and there will not be any political fallout." You not only expressed unfamiliarity with the email and represented that you had never had a conversation with Ms. Smith, but also asserted that: 1.) you had never spoken with Scott Monroe about the White House in regards to the Beale bonus matter, 2.) you were never concerned "that the White House would look at political fallout," and 3.) you "never had concerns about the White House's interference."

**a.** Have you ever communicated with anyone at the White House about the Beale matter? If so, please describe these communications to the best of your ability, including the date of the interaction and the individual with whom you interacted. If any documentation exists of such communications, please provide them to the Committee.

**b.** Did you ever communicate with Craig Hooks, Scott Monroe, or anyone else about the White House in connection to John Beale's misconduct? If so, please describe these communications to the best of your ability, including the date of the interaction and the individual with whom you interacted. If any documentation exists of such communications, please provide them to the Committee. If not, was Mr. Monroe fabricating these concerns?

**c.** Have you ever been concerned about the potential for "political fallout" from the Beale investigation? If so, what sort of "political fallout"? Please describe in detail.

**d.** Were you aware of anyone within EPA, or the Obama Administration more broadly, who was concerned about the potential for "political fallout" from the Beale investigation? If so, please identify these individuals and your impressions of their concerns.

**e.** Were any of your actions in the investigation of Beale's misconduct shaped by the potential for "political fallout"?

**f.** Why did you tell the OIG that the only "political fallout would have been during your confirmation hearing"? Were you concerned that Beale would be an obstacle to your confirmation as EPA Administrator?

**Answer:** I did not consult with anyone in the White House about the appropriate course of action to take in response to John Beale's pay and attendance issues. While an incident of this nature can lead to questions during the confirmation process and Mr. Beale's misconduct has been the focus of multiple Congressional Oversight hearings and requests, this level of attention occurred after the retention incentive was cancelled and after the matter was referred to the Office of Inspector General.

When I developed concerns about Mr. Beale's retention incentive and his attendance record, I sought the assistance of appropriate EPA employees. Under the circumstances, it was prudent to verify information before acting on it. This was not based on a concern about political fallout, but on a desire to verify Mr. Beale's status. While there was a delay in taking action, Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture.

**Question 8:** During the hearing, you challenged my criticism of Beale being allowed to retire by noting that "every employee has their right to retirement" and that you are "sure he exercised that right."

**a.** Did you have cause to fire Beale in April 2013?

**b.** Did Mr. Beale have a "right" to retire?

**c.** Does every EPA employee facing potential discipline and/or termination have the "right" to retire with full benefits first?

**Answer:** Although EPA management was aware in April 2013 of information pointing to serious misconduct on the part of Mr. Beale, at that time his misconduct was also the subject of an EPA Office of the Inspector General (OIG) investigation. As is customary, once the EPA referred the matter to the OIG for investigation and learned the matter may result in criminal prosecution, the EPA prioritized the criminal investigation and deferred administrative action until the OIG completed its review and provided a final report to the EPA.

A Federal employee's ability to retire – even in the face of potential disciplinary action – is controlled by Federal law, not EPA policy. An employee, like Mr. Beale, who is eligible to retire under the applicable statutes and regulations, may submit an application for retirement which is ultimately approved or disapproved by the Office of Personnel Management. EPA has no authority to prevent a retirement eligible employee from applying for retirement.

**Question 9:** During the hearing, you also challenged my criticism of Beale being allowed to retire by noting that he is currently in federal prison. This suggests that you view prosecution by the Department of Justice as a sufficient substitute for adequate internal EPA controls and actions. Is that an accurate reflection of your views?

**Answer:** The EPA has internal controls in place, and we are working to update these controls as well as to improve clarity and accountability. These improvements are being actively integrated into the Agency's processes. In April, the EPA completed its *Report on Internal Control Assessments of EPA's Sensitive Payment Areas*. This report used GAO-standard procedures for assessing internal controls, identified deficiencies, and proposed corrective actions along with estimated completion dates for those actions.

b. Why didn't you take any meaningful action on your suspicions?

c. In light of your professed concerns over Beale from the moment you started at EPA, did you worry about the kind of example Beale set for other EPA employees?

**Answer:** Mr. Beale contributed legitimately to the work of the Agency during much of his career and I was unaware of his fraudulent conduct when I first joined the Agency in 2009. When I developed concerns about Mr. Beale's retention incentive and his time and attendance reporting, I sought the assistance of the appropriate EPA employees. Under the circumstances, it was prudent to verify information before acting on it. Mr. Beale is now serving over two years in prison for his criminal fraud and has, to date, paid the government nearly $900,000 in restitution and $500,000 in forfeiture. The overwhelming majority of the approximately 16,000 EPA employees are dedicated, hardworking, professional public servants.

**Question 13:** What verification mechanisms exist to ensure that employees do not continue collecting paychecks after they stop working?

**Answer:** The EPA has procedures in place to handle employee separations in situations of death in-service, retirement, and other separations. In the case of separations other than due to death or retirement, the Agency follows a five-step process that, among other things, ensures employees do not continue collecting paychecks after they stop working. These steps are:

*Step 1:* Program Offices Issue SF-52 (Request for Personnel Action) to HR Shared Services Center (HR SSC);
*Step 2:* HR SSC Processes SF-52 and issues SF-50 (Notice of Personnel Action);
*Step 3:* HR SSC Prepares Benefits Separation Package;
*Step 4:* HR SSC Issues Separation Notice to the Defense Finance and Accounting Services (DFAS), et al.; and
*Step 5:* Offices follow Time and Attendance Procedures if not immediately removed from payroll.

In April 2014, the Agency also identified other steps to further ensure payments do not continue after employee separation (elimination of default pay and elimination of mass approval). These improvements are being integrated into the Agency's processes. In the event of inappropriate pay after separation, the Agency has and will continue to issue debt collection notices for any overpayment.

Finally, EPA is working on measures to increase clarity and accountability. These measures will include issuing an Executive Approval Framework and other guidance to notify employees and supervisors of the need to accurately submit and verify time and attendance.

**Question 14:** How many cases of suspected time and attendance fraud have you been made aware of during your tenure as Administrator? How many suspected instances have been

The overwhelming majority of the approximately 16,000 EPA employees are dedicated, hardworking, professional public servants. Nonetheless, it is absolutely essential that EPA develop and maintain internal controls that ensure the accurate reporting of time and attendance and the fair and appropriate application of all EPA human resource policies.

**Question 10:** How many EPA employees have been terminated during your tenure as Administrator? How many employees within the Office of Air and Radiation were terminated during your time as Assistant Administrator?

**Answer:** According to Agency records, from July 18, 2013 (Gina McCarthy's confirmation as Administrator to the EPA) until May 1, 2014 (date of data pull), 11 EPA employees have been terminated. From June 2, 2009 (Gina McCarthy's confirmation as Assistant Administrator to the Office of Air and Radiation) until July 18, 2013 (Gina McCarthy's confirmation as Administrator to the EPA), 8 Office of Air and Radiation employees were terminated.

**Question 11:** During the hearing, you responded to a question from Senator Whitehouse by describing Beale as an outlier who is not representative of the EPA workforce. Nevertheless, you told the OIG that "Beale 'walked on water at EPA' due to his work on the [Clean Air Act] and other policy issues in the early 1990s." Furthermore, during your time as his direct supervisor as Assistant Administrator, you effusively praised Beale in emails to the entire Office of Air and Radiation. Additionally, even as Beale was sentenced to 32 months in federal prison for his crimes, he was offered strong support from a number of current and former senior EPA employees. They submitted letters, which went much further than calling him "a good man." Indeed, they called him a "tower of fortitude" and a man whom they still "respected ... immensely." One former colleague even said that "John is still one of the five people I would speed dial for help." How do you reconcile your claim that Beale was an outsider and not representative of the employees at EPA within the Office of Air and Radiation, with the praise offered by senior EPA officials on Beale's behalf even after he was exposed?

**Answer:** All of us at the EPA were offended by the fraudulent actions of Mr. Beale. He was an outlier in that the overwhelming majority of 16,000 EPA employees are dedicated, hardworking, and professional public servants, well-deserving of the public trust placed in the Agency.

**Question 12:** As Assistant Administrator for OAR, you sent multiple staff-wide emails praising Beale's performance. In one email you referred to his frequent absences from work and stated "we are keeping him well hidden so he won't get scooped away from OAR anytime soon." Yet, you told the OIG that you had suspicions over Beale from the moment you started at EPA.

**a.** Why did you believe he was such an exemplary employee?

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referred to you from an external source, and how many were discovered by you and those you supervise?

**Answer:** Where an instance of time and attendance fraud is suspected, EPA encourages such suspicion and any supporting information to be referred to the individual's supervisor and the EPA Office of Inspector General.

**Question 15:** How many cases of suspected time and attendance fraud had you been made aware of during your tenure as Assistant Administrator for the Office of Air and Radiation? How many suspected instances have been referred to you from an external source, and how many were discovered by you and those you supervise?

**Answer:** Where an instance of time and attendance fraud is suspected, EPA encourages such suspicion and any supporting information to be referred to the individual's supervisor and the EPA Office of Inspector General.

**Question 16:** Beale spent hundreds of thousands of taxpayer dollars on excessive travel. Yet, EPA employees signed off on his erroneous travel vouchers because they thought he was "special."

**a.** How much money does EPA spend on travel?

**Answer a:** In the FY 2015 President's Budget, the EPA budgeted $42.2 million for personal travel, which is a 30% decrease from budgeted personal travel in the FY 2010 enacted budget. Recent EPA travel budgets have been historically low as demonstrated in the table below. In the past five fiscal years (FY 2011-FY 2015), the EPA budgeted personal travel has not exceeded $44 million, while from FY 2006 to FY 2010, budgeted personal travel ranged from $54-$60 million.

The reduction in EPA's travel budget has been achieved through a decrease in the number of face-to-face meetings and increased use of video and teleconferencing. Recognizing tight government budgets, EPA has been judiciously reserving travel funds for priority travel and using technology whenever possible.

**Budgeted Travel: FY 2010-FY 2015**

*(Dollars in Thousands)*

| | FY 2010 ENA | FY 2011 ENA | FY 2012 ENA | FY 2013 ENA | FY 2014 ENA | FY 2015 PB | % change '10 EN to '15 PB |
|---|---|---|---|---|---|---|---|
| Travel, Personal | $60,507 | $37,770 | $43,944 | $38,451 | $38,549 | $42,239 | -30.2% |

b. Is there really a different standard for certain EPA employees' travel?

**Answer b:** The General Services Administration (GSA) promulgates the General Travel Regulation, which applies to agencies Federal Government-wide. Under that regulation and GSA guidance, there are certain circumstances where Agencies are authorized to approve special classes for employee travel. For example, "other than coach- class" may be used for air travel when it is "necessary to accommodate a medical disability or other special need." 41 CFR 301-10.123. The EPA's policies regarding official travel are consistent with GSA rules and guidance.

c. Who else is "special" at the EPA that can get away with this?

**Answer c:** All EPA employees, without exception, are expected to comply with applicable laws and regulations. In addition, the EPA has made several key improvements to our travel policies and procedures in an effort to prevent the type of fraud committed by Mr. Beale from being committed again.

**Question 17:** What is the process by which time and attendance problems are dealt with?

**Answer:** As the EPA Office of Inspector General's website[2] explains, the Agency's appropriate response to a time and attendance problem will vary based on the particular problem identified. Where an instance of time and attendance fraud is suspected, the EPA encourages such suspicion and any supporting information to be referred to the individual's supervisor and the EPA Office of Inspector General.

**Question 18:** As an organization, would you characterize the EPA as having a culture that values attention to proper time and attendance keeping?

**Answer:** Absolutely. The EPA's employees are generally honest and conscientious about proper time and attendance keeping, and well deserving of the public trust placed in the Agency.

**Question 19:** According to the Corrective Action Report of December 2013, EPA is migrating to a new payroll system in 2014. Please describe this new system. What features does it offer over the current system? Is the transition on schedule? How much did it cost?

**Answer:** The Department of the Interior's Interior Business Center (IBC) is an Office of Management and Budget and Office of Personnel Management approved Human Resources Line of Business (HRLoB) Shared Service Center. Interior Business Center's Federal Personnel/ Payroll System (FPPS) is an integrated human resources and payroll system used by numerous federal government entities. FPPS implements all current regulations, including specialized pay, garnishments, special appointment programs, and other payroll related functions.

[2] http://www.epa.gov/oig/

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FPPS integrates HR and payroll functionalities which was previously split between two separate systems at EPA, PeoplePlus and Defense Civilian Payroll System (DCPS). PeoplePlus was the HR system of record for EPA performing functions such as new hires, promotions, details, and separations. With the migration, PeoplePlus will no longer perform the HR services, serving only as the Time and Attendance system. EPA's former payroll provider was Defense Finance and Accounting Service (DFAS), and their payroll system is DCPS. This system has been fully replaced by FPPS.

Before migrating to this system, EPA relied on separate systems for HR processing and payroll processing, which required EPA to maintain a technical interface between the systems. In the past, HR and time & attendance data was sent from PeoplePlus to DFAS. Now, only time and attendance data is sent. Also, HR actions are input directly into the integrated FPPS system. In the past, HR actions were input into PeoplePlus and then sent at a later time through the interface to DFAS. This lag has been eliminated.

In addition, human resources related processes are now automated in the new system, which were formerly paper based. These features result in more accurate and faster processing of HR related actions. For example, one benefit of FPPS is that it provides the ability to stop retention incentive payments automatically by entering into the system the end date of the incentive payment.

The migration of EPA's HR and payroll services to IBC's FPPS system was implemented in June 2014 on schedule. The estimated fees that IBC will charge EPA for FY 2014 is $2.1 million and $4.4 million in FY 2015.

**Question 20:** According to the Corrective Action Report of December 2013, "Currently, the EPA is implementing a policy of "default pay" and "mass approval," where an employee will be paid for a full 80 hours over a pay period even if one step of the process fails to occur." Please explain the rationale behind this policy and how long has it been in effect.

**Answer:** Beginning in 2004, the EPA began using a time approval system that allowed for group approval (which allowed a manager to approve a group of employees at once), mass approval, and default pay. The group approval capability was removed in 2013, and the EPA is now implementing new approval mechanisms that will not allow for mass approval or default pay.

**Question 21:** According to the Corrective Action Report of December 2013, "the EPA also amended its time and attendance policy on June 20, 2013, and is currently engaged in negotiations with the agency's unions over the revised policy." Please detail the status of these negotiations.

**Answer:** Two EPA unions, ESC (Engineers and Scientists of California) and NTEU (National Treasury Employees Union), sought to negotiate over the changes to the time and

attendance policy. The agency resolved all issues with ESC in November, 2013 and with NTEU in January, 2014.

**Question 22:** According to the Corrective Action Report of December 2013, EPA said that it "expects to complete its review" of executive payroll approvals, employee departures and payroll, statutory pay limits, parking and transit subsidy, retention incentives, travel other than coach class travel, travel reimbursements above the government rate, and executive travel approval. According to this report, the reviews were supposed to be finished within 4 to 12 weeks. What is the status of each?

**Answer:** In April 2014, the EPA completed a review of each of these issues in its *Report on Internal Control Assessments of EPA's Sensitive Payment Areas.* This report used GAO-standard procedures[3] for assessing internal controls looking at all of the areas mentioned above, identified deficiencies, and proposed corrective actions along with estimated completion dates for those actions. On April 17, 2014, we delivered this Report to the EPA Office of Inspector General.

**Question 23:** According to the Corrective Action Report of December 2013, no EPA employees were then receiving a retention incentive. Is this still the case? When was there a major reduction in the number of people receiving them? Are they still available?

**Answer:** At present, there are no EPA employees receiving a retention incentive. Use of retention incentives at EPA has always been rare; only 28 employees have received such incentives since 1990. Previous retention incentives have ended through expiration, termination, or change in the employment status of the employee. While no employees are currently receiving a retention incentive, the program is available if incentives are properly justified, reviewed and approved.

**Question 24:** According to the Corrective Action Report of December 2013, "regulations also provide agencies with the ability to request a waiver from OPM of these caps up to 50% of an employee's salary." Are you aware of instances where an EPA employee exceeded the cap by 50%? What is the largest waiver you have encountered?

**Answer:** I am not aware of any instances in which EPA has sought this type of waiver and therefore there is no incident when a large waiver was encountered.

**Question 25:** How many EPA employees are currently receiving salaries that are above the statutory cap and require a waiver?

**Answer:** There are no EPA employees receiving salaries above the statutory cap.

**Question 26:** Please identify the position of every employee of the EPA who has exceeded the statutory pay cap during your tenure as Administrator, indicate by how much that employee exceeded the salary cap, and whether that employee received a proper waiver to do so.

[3] http://www.gao.gov/greenbook/overview

**Answer:** Generally, there are three pay limitations applicable to federal employees. First, employees have a bi-weekly limit to pay. Second, employees are subject to an annual maximum earnings limitation which includes basic pay and premium pay. Finally, there is an aggregate limit to pay which includes annual basic pay plus premium pay, awards, allowances, and differentials.

No EPA employees have been paid beyond the aggregate limitation on pay (5 U.S. Code 5307 and 5 Code of Federal Regulations 530.203) during the Administrator's tenure. Further, there is no statutory basis for making an exception or waiver to the limitation (which is the pay rate of Executive Level I), and EPA compensation has not exceeded that limitation.

Relative to the annual maximum earnings limitation (5 U.S. Code 5547 (b) (2) and 5 Code of Federal Regulation 550.107), an exception may be made for premium pay work in conjunction with U.S. military contingency operations in designated locations and countries. EPA has experienced only one case of a claim for granting an exception to the annual maximum earnings limitation. For that single instance, an employee performed substantial premium pay work while on detail (under an interagency agreement to the U.S. Army Corps of Engineers) in Iraq during the latter half of 2012 and first half of 2013. The employee's basic pay plus premium pay compensation entitlement exceeded the annual maximum earnings limitation. EPA is presently conducting a thorough review of the claim to ensure accurate accounting and has not yet determined the full claim amount for that 2013 exception.

**Question 27:** Please identify the position of every employee of the Office of Air and Radiation who exceeded the statutory pay cap during your tenure as Assistant Administrator. Please also indicate by how much that employee exceeded the salary cap, and whether that employee received a proper waiver to do so.

**Answer:** During Gina McCarthy's tenure as Assistant Administrator of the Office of Air and Radiation (June 4, 2009 to July 18, 2013), there were no employees compensated beyond the annual maximum earnings limitation. The compensation of one employee, Mr. John Beale, exceeded the aggregate limitation (5 USC 5307) by $5,920.00 and $6,105.00, respectively in FY 2009 and FY 2010. Mr Beale received no waiver for the exceedance and has subsequently paid back all overpayments to the government.

**Question 28:** How many EPA employees have received subsidized parking during your tenure as Administrator? Please provide as specific of an answer or estimate as possible.

**Answer:** Approximately 290 EPA headquarters employees have received subsidized parking at the federal triangle complex at some point during 2013 or 2014.

**Question 29:** How many Office of Air and Radiation employees received subsidized parking during your tenure as Assistant Administrator? Please provide as specific of an answer or estimate as possible.

**Answer:** Approximately 76 EPA Office of Air and Radiation employees received subsidized parking at the federal triangle complex at some point between 2009 and 2013.

**Question 30:** On March 19 of this year, the Committee's minority staff published a 67-page report entitled *EPA's Playbook Unveiled: A Story of Fraud, Deceit, and Secret Science,* which documents how Beale coordinated abusive tactics in the rulemaking process behind the 1997 Ozone and Particulate Matter National Ambient Air Quality Standards and how the EPA adopted this system that he pioneered in numerous subsequent air quality regulations. In news reports, EPA representative Alisha Johnson downplayed Beale's role: "While Mr. Beale did work on the rules mentioned in the report, he was just one of a large number of people from a number of disciplines across the Agency who provided input on those rules."

**a.** Is it not true, though, that Beale's bonuses and promotions were based in large part on his "key role" on one of the "most significant issues he managed": the 1997 Ozone and Particulate Matter NAAQS?

**b.** Is it not true that in a staff wide email sent on December 3, 2010, you praised Beale for his "leading role" in the 1997 NAAQS review?

**c.** In light of these incontrovertible facts, why is EPA now downplaying the role that even you claimed he had in setting the 1997 NAAQS?

**Answer:** While I was not with the U.S. EPA in 1997 or at the time Beale received his promotions or his first retention bonus, my understanding is that these were based on his legitimate work for the Agency.

Each review of the National Ambient Air Quality Standards (NAAQS) is an incredibly complex, technical and resource-intensive undertaking based on sound science and legal standards. While Beale played a visible role through his position at that time in the Office of Air and Radiation, his involvement in no way undermines the rational basis for the Agency's decisions nor the integrity of the administrative process. These rules were reviewed in the Supreme Court, which concluded in 2001 that costs of implementing the standards could not be considered in setting the standards. The PM standard was entirely upheld by the courts, and the ozone standard was upheld (with one small exception which did not require any changes in the standard). Since that time, both standards have been re-reviewed by the EPA.

**Question 31:** In EPA's justification for its proposed FY 2015 budget, the Agency requests Congress extend its authority under Title 42 to hire individuals to science and research positions at salary levels above the general service employee pay limit.

**a.** Please list the employees who were hired under Title 42?

**Answer a:** The table below provides EPA's current on-board Title 42 employees.

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| FY Hired | OPM Position Classification | EPA/ORD Organization | Science Expertise |
|---|---|---|---|
| 2006 | Research Chemist (Bioinformatics) | National Center for Computational Toxicology (NCCT), Research Triangle Park, NC | • Leads cutting-edge research in systems models of cellular behavior.<br>• International expertise in bioinformatics and predictive biochemical pathways. |
| | Research Physicist (Computational Systems Biology) | NCCT, Research Triangle Park, NC | • Heads innovative research in developing complex computational solutions to use models to characterize chemical exposure, hazard, or risk, such as ToxCast.<br>• International leadership in creating informatics teams and in the area of genomics. |
| | Research Biologist (Systems Biology) | National Health and Environmental Effects Research Laboratory (NHEERL), Integrated Systems Toxicology Lab, Research Triangle Park, NC | • Leads the lab in initiating systems approaches in developing molecular biology methodologies.<br>•International leadership in combining experimental and computational approaches to health effects of environmental contaminants. |
| 2007 | Research Biologist (Developmental Systems Biology) | NCCT, Research Triangle Park, NC | •Heads ORD's research to develop complex systems level models of biological processes and tissues.<br>• Provides international expertise in developmental biology, systems biology, genomics, and computational modeling. |
| 2007 | Supervisory Research Biologist (Director) | NHEERL/Environmental Public Health Lab/Clinical Research Center, Research Triangle Park, NC | • Leads ORD's research on pulmonary effects related to air pollution and sensitivity factors.<br>• Brings international experience in the area of assessment and characterization of immunological and allergic diseases in response to air pollution. |
| 2008 | Supervisory Research Biologist (Director) | National Center for Environmental Assessment (NCEA), Research Triangle Park | •Directs ORD assessment of the health and environmental effects of single environmental pollutants and combinations of pollutants. |

| FY Hired | OPM Position Classification | EPA/ORD Organization | Science Expertise |
|---|---|---|---|
| | | Center, NC | • Provides international expertise in health risk assessment and air pollutants research. |
| 2010 | Supervisory Chemist (Director) | National Risk Management Research Laboratory (NRMRL), Sustainable Technology Lab, Cincinnati, OH | • Leads ORD's development and application of models and tools to prevent, mitigate, and control environmental risks.<br>•International expertise in green chemistry, engineering, and sustainability science. |
| 2011 | Supervisory Health Scientist (Director) | NHEERL, Environmental Public Health Lab, Research Triangle Park, NC | • Heads ORD's integrated, clinical, epidemiological, and laboratory animal based research program.<br>• Brings international leadership in cardiac effects of air pollution on environmental exposure and risk identification and characterization. |
| 2011 | Supervisory Research Biologist (Director) | NHEERL Integrated Systems Toxicology Lab, Research Triangle Park, NC | • Leads ORD's research in using systems biology approaches to describe normal biological, homeostatic processes and to identify key events that signal departure from those processes leading to adverse health outcomes.<br>•International leadership in toxicology, molecular biology, pharmacology, and genetics. |
| | Supervisory Biologist (Director) | NHEERL, Toxicity Assessment Lab, Research Triangle Park, NC | • Directs ORD's integrated toxicology assessment research that incorporates developmental biology, reproductive biology, endocrinology, and neurosciences.<br>•Provides international expertise in in vivo toxicology, neurological biology, reproductive and developmental biology, and source to effects models. |
| | Supervisory Physical Scientist | National Exposure Research Laboratory | • Heads ORD's research into fate and transport of environmental stressors, |

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| FY Hired | OPM Position Classification | EPA/ORD Organization | Science Expertise |
|---|---|---|---|
| | (Director) | (NERL), Ecosystems Research Lab, Athens, GA | including studies of the behavior of contaminants, nutrients, and biota in environmental systems.<br>• Provides international expertise in working with ecologists, chemists, fisheries biologists, geologists, and engineers. |
| | Supervisory Biologist (Director) | NERL, Microbiological and Chemical Exposure Assessment Research Lab, Cincinnati, OH | • Leads ORD's research on microbial ecology and the potential risk factors in natural and engineered water systems.<br>• International leader in microbial ecology, chemistry, and physiology. |
| 2012 | Supervisory Biologist (Deputy Assistant Administrator for Science) | Office of the Assistant Administrator, Immediate Office, Washington, DC | • Leads all science and research in ORD.<br>• Provides scientific foundation and leadership across ORD research programs.<br>• International leader in the areas of developmental toxicology, endocrine disruption, benchmark dose analysis, and computational toxicology. |
| | Supervisory Biologist (National Program Director) | Air, Climate, and Energy National Research Program, Research Triangle Park, NC | • Provides the critical science to develop and implement the National Ambient Air Quality Standards under the Clean Air Act. The research program fosters innovative approaches to ensure clean air in the context of a changing climate and energy options.<br>• Internationally recognized expert in the area of public health effects of air pollution, including inhalation and cardiovascular toxicology. |
| | Supervisory Biologist (National Program Director) | Safe and Sustainable Water Resources Research Program, Washington, DC | • Heads ORD's research on developing new approaches for evaluating groups of contaminants for the protection of human health and the environment; developing innovative tools, technologies, and strategies for |

| FY Hired | OPM Position Classification | EPA/ORD Organization | Science Expertise |
|---|---|---|---|
| | | | managing water resources; and supporting a systems approach for protecting and restoring aquatic systems.<br>• Provides internationally recognized expertise in the areas of environmental sciences, toxicology, human health, and wetland restoration. |
| 2012 | Supervisory Environmental Engineer (Director) | National Center for Environmental Research, Washington, DC | • Leads and conducts highly recognized, leading edge, extramural research in the areas of exposure, risk assessment, and risk management. This includes supporting high-quality research by the nation's leading scientists and engineers that will improve the scientific basis for national environmental decisions.<br>• Internationally recognized leader and expert in the area of environmental engineering, including hazardous waste management, treatment, and disposal. |
| | Supervisory Physical Scientist (National Program Director) | Chemical Safety for Sustainability, Washington, DC | • Provides the scientific foundation for the chemical safety for sustainability program in order to advance environmental sustainability.<br>• Leads international innovation in areas of chemical design and chemical impacts to human health and the environment. |
| 2012 | Supervisory Biologist (Director) | NCEA, Washington, DC | • Leads ORD's health and ecological assessment program to determine how pollutants may impact human health and the environment.<br>• Internationally recognized leader and expert in toxicology and environmental health sciences. |

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| FY Hired | OPM Position Classification | EPA/ORD Organization | Science Expertise |
|---|---|---|---|
| | Supervisory Environmental Health Scientist (Director) | NERL, Human Exposure and Atmospheric Sciences Lab, Research Triangle Park, NC | • Heads ORD's research effort to develop innovative approaches for assessing the fate, transport, and exposure to air pollutants from different sources and develop and apply tools for assessing aggregate exposures and cumulative risk to all stressors from all sources.<br>• Internationally recognized expert in the area of human exposure and atmospheric sciences. |
| 2013 | Associate Director for Health | NHEERL, Research Triangle Park, NC | • Leads NHEERL's health effects research program to assess the impact of chemical and other environmental stressors on human health that builds on systems biology thinking employing a variety of approaches such as in vivo, in vitro, and in silica technologies.<br>• International recognition in the areas of gene regulation, toxicokinetics and toxicogenomics, and developmental toxicology. |
| | Supervisory Toxicologist (Director) | NCCT, Research Triangle Park, NC | • Heads ORD's research into the application of mathematical and computer models to technologies derived from computational chemistry, molecular biology, and systems biology.<br>• Brings international leadership and experience in the areas of genomic biology, bioinformatics, and chemical safety sciences. |
| FY 2014 | Supervisory Biologist (Director) | NRMRL, Kerr Lab, Ada, OK | • Leads NRMRL's research into the interactions of technical, economic, and social factors which affect current and future demands on water resources. |

| FY Hired | OPM Position Classification | EPA/ORD Organization | Science Expertise |
|---|---|---|---|
| | | | • International recognition on subsurface resources, water quality, nutrient cycling, and ecosystems research and management. |

**b.** What is the salary range for current EPA employees hired under Title 42?

**Answer b:** The Title 42 salary range is from the GS-15 step 10, with locality pay, to $250,000.

**Question 32:** In EPA's justification for its proposed FY 2015 budget, the Agency requests Congress remove the ceiling under Title 42, which limits the hiring of 50 persons to science and research positions at salary levels above the general service employee pay limit.

**a.** How many persons would EPA hire under Title 42 if there was no ceiling?

**Answer a:** As recommended by the National Academy of Sciences in its 2010 report on EPA's Use of Title 42, EPA would determine the number of people to hire under Title 42 based on our programmatic needs and available budget.

**b.** What area of science and research does EPA need more employees under Title 42?

**Answer b:** Title 42 appointments in the following fields, for example, would benefit research efforts across our research organizations and help provide the transformative innovative scientific leadership to meet the Agency's mission requirements:

- Systems biology
- Integrated modeling
- Exposure informatics
- Predictive toxicology
- Epidemiology
- Integrated chemical hazard assessment
- Ecology
- Methods development
- Life-cycle analysis

**Topic: CASAC**

**Question 33:** From March 25-27, 2014, the Clean Air Scientific Advisory Committee (CASAC) ozone review panel met to review national ambient air quality standards for ozone. The

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composition of CASAC is not only critical to the impending ozone standards, but in the context of EPA's proposed FY 2015 budget, it is critical given the massive amount of federal research grants these panelists have received to produce work they are reviewing as CASAC panelist, essentially creating a scientific revolving door. Yet, the Agency has continued to deny public access to the underlying science at the same time it continues to issue more grants to the same researchers.

**a.** In light of these facts, are you aware that 75% (15 out of 20) of the CASAC ozone review panelists have received EPA research grants?

**b.** Are you aware that those 15 panelists have received over $180.8 million in EPA research grants?

**c.** Is this a conflict of interest? If not, why not?

**Answer:** The CASAC procedures and policies are transparent, publically available, and supported by its members. These policies assure that these advisory committees provide a balance of perspectives and appropriate scientific expertise. Procedures are in place to address issues such as conflict of interest, including public disclosure of any information that could create an appearance of bias. In seeking the best advice, the EPA looks to nationally and internationally renowned scientists to ensure the work we do is based on sound, credible science. These scientists are often cutting edge experts in the area of air pollution. Thus, it is no surprise that some compete successfully for research grants – from the EPA and from others such as NSF and NIH. OMB's peer review guidance explicitly recognizes that research grants that were awarded to the scientist based on investigator-initiated, competitive, peer-reviewed proposals, do not generally raise issues of independence.

**Question 34:** In our private discussions, prior to your nomination, you stated that "legitimate scientists" would be provided access to underlying data. How does the agency define a "legitimate scientist" and "legitimate scientific inquiry?"

**Answer:** There are many studies across the scientific disciplines that use publicly available data sets that are included in the Integrated Science Assessments (ISAs) for ozone and PM. The EPA maintains a comprehensive list of all studies included in these assessments in its publicly available Health & Environmental Research Online (HERO) database (http://hero.epa.gov/). In many studies, however, scientific protocols require that authors not report underlying data pertaining to personal confidential medical information to protect the privacy of study participants. The EPA understands that it is important to increase transparency and public access to information, but it also is essential to protect the privacy of individuals who have served as subjects in studies along with their personal health information. For this reason, research institutions that hold these data have detailed requirements and procedures for accessing their data. For example, the American Cancer Society (ACS) clearly states that investigators who are not employed in ACS' Epidemiology Research Program may request relevant data to conduct a study. There are, however, data access policies and procedures, which are clearly outlined at http://www.cancer.org/acs/groups/content/@research/documents/document/acspc-039148.pdf.

**Topic: White House Inference with Congress**

**Question 35:** On June 13, 2013, Kevin Minoli, Acting General Counsel, sent the White House an email asking for permission to release 106 emails to Chairman Issa and Ranking Member Vitter. These 106 emails were also subject to Ranking Member Vitter's negotiations over your confirmation as EPA Administrator. The EPA did not turn over these documents, and only did so AFTER Congress subpoenaed the documents. Accordingly, it appears that the White House acted to obstruct a Congressional investigation. Since the discovery of this email, Chairman Issa has issued a subpoena for all documents in EPA's possession that relate to this obstruction.

a. Ms. McCarthy, according to an email obtained by the Committee – it appears that EPA sought White House permission to release 106 documents to me and Chairman Issa last June. EPA did not release these documents until Issa issued a subpoena in September 2013. Did the White House ever instruct you or EPA official to withhold these documents from Congress?

b. Is it common practice for EPA to seek the White House's permission to respond to a Congressional request, even when White House equities are not involved?

c. Did EPA do so in this case?

d. Why did EPA refuse to turn over the documents in question until a subpoena had been issued?

e. Why has EPA not complied with the most recent subpoena for documents relating to White House interference with a Congressional Investigation?

**Answer:** It is common practice for the EPA, in every administration to appropriately consult with various offices within the White House including the Council on Environmental Quality, the Office of Management and Budget, and the White House Counsel's Office. The EPA did consult with the Office of White House Counsel on this particular request for documents, though the ultimate decisions regarding appropriate handling of the documents were made by the EPA. The EPA respects Congress's important oversight role and strives to respond to all requests from Congress, regardless of whether those requests are made in the context of a letter or a subpoena.

**Topic: New Source Performance Standards (NSPS)**

**Question 36:** When EPA evaluated whether the cost of electricity from a new power plant using CCS is reasonable, did EPA rely on the cost of the technology at its current status as an emerging technology for power plants or did EPA look at what the costs are projected to be when CCS reaches the status of a fully mature technology?

a. What are the differences in cost between CCS in its current status and when it reaches status as a fully mature technology?

b. Has the Department of Energy shared with EPA how long before CCS is considered a fully mature technology and cost competitive for power plants?

c. Mr. Julio Friedmann, Deputy Assistant Secretary at the Department of Energy is an expert in CCS technologies. He recently testified that early stage deployment of CCS for new power plants would increase the costs of wholesale electricity by approximately "70 to 80 percent." Does EPA dispute the validity of this statement?

**Answer:** For an emerging technology like CCS, costs can be estimated for a "first-of-a-kind" (FOAK) plant or an "nth-of-a-kind" (NOAK) plant, the latter of which has lower costs thanks to the "learning by doing" and risk reduction benefits that result from serial deployments as well as from continuing research, development, and demonstration projects.

For plants that utilize technologies that are not yet fully mature and/or which have not yet been serially deployed in a commercial context, such as IGCC or any plant that includes $CO_2$ capture, the cost estimates in Table 6 of the proposal preamble represent a plant that is somewhere between FOAK and NOAK, sometimes referred to as "next-of-a-kind," or "next commercial offering." These cost estimates for next commercial offerings do not include the unique cost premiums associated with FOAK plants that must demonstrate emerging technologies and iteratively improve upon initial plant designs. However, these costs do utilize currently available cost bases for emerging technologies with associated process contingencies applied at the appropriate subsystem levels.

The predicted costs for deployment of CCS can vary depending on a variety of reasons. We do not know the assumptions that went into Mr. Friedmann's estimated costs. However, we note in the proposed standards of performance that deployment of "partial CCS" – rather than "full CCS" (i.e., at capture levels of 90 percent or greater) – can be done at a much lower cost. In Table 6 of the proposed standards, we provided cost estimates for new generating technologies meeting the proposed emission limit. The increased cost ranged from 12 – 20 percent. Those costs can be further lowered when the new plant is able to sell the captured $CO_2$ for use in enhanced oil recovery (EOR) operations.

Because the proposed new source carbon pollution standards are in line with current industry investment patterns, they would not have notable costs and are not projected to impact electricity prices or reliability. The incremental prices cited by DOE may be applicable to a specific plant relative to another specific plant. However, one hypothetical plant does not significantly change retail prices paid by consumers, which are derived based on the cost of generation and transmission across the power system.

**Question 37:** In the proposed New Source Performance Standard rule for new electricity plants, EPA states that the standard it set for a new natural gas combined cycle power plant (1,000 pounds of $C0_2$ per megawatt hour) is being met by over 90% of those types of plants in operation today. How many coal fired power plants in operation today can meet the proposed standard (1,100 pounds of $C0_2$ per megawatt hour) for new coal power plants?

**Answer:** There are no coal-fired facilities operating today that are required to meet a standard of 1,100 lb/MWh. However, both the Boundary Dam plant and the Kemper IGCC plant are both in advanced stages of construction and are both designed to emit $CO_2$ at levels significantly lower than 1,100 lb $CO_2$/MWh proposed standard.

**Question 38:** In previous EPA testimony, the Agency says the proposed standards for a new coal power plant "reflect the demonstrated performance of efficient, low carbon technologies that are currently being used today."

**a.** Are there any full-scale coal power plants currently operating in the US that are using fully integrated CCS technology?

**b.** Are there any electricity generating plants using CCS components in a FULLY INTEGRATED system (not gasification or EOR systems)?

**c.** If not, how can EPA select a standard without knowing whether it is achievable in practice?

**Answer:** EPA's proposed standards rely on a wide range of data, information, and experience well beyond that generated by particular projects. The EPA has determined that CCS is technically feasible for new coal-fired power plants because all of the major components of CCS – the capture, the transport, and the injection and storage – have been demonstrated and are currently in use at commercial scale.

**Topic: Social Cost of Carbon**

**Question 39:** How many EPA full-time equivalent (FTE) hours were dedicated to the Interagency Working Group that developed the 2013 social cost of carbon estimates?

**Answer:** EPA employs staff with expertise in science and economics who work on issues related to climate change and contribute to the development of good science and sound policy. In that capacity, EPA staff from the Office of Policy (OP) and Office of Air and Radiation (OAR) provided technical expertise to the broader SCC workgroup as needed. The nature of such work and interactions with EPA's broader climate portfolio does not allow for Agency resource estimates at the fine resolution level requested.

**Question 40:** How much (in dollar amount) of EPA's FY 2014 appropriations were dedicated to the Interagency Working Group's 2013 social cost of carbon estimates, including the Office of Air and Radiation's Office of Atmospheric Program's "technical work and the modeling" for the estimates?

**Answer:** EPA's contributions to the 2013 SCC estimates were funded through the budget allocations to OP and OAR, specifically through salaries that covered staff time. As noted above, the nature of such work and interactions with other projects does not allow for precise Agency resource estimates at the fine resolution level requested.

**Question 41:** Do you believe it is appropriate for the EPA to enter into formal consultation with USFWS to assess impacts on threatened and endangered species from major regulations under the Clean Air Act? As you are aware, EPA consults with the USFWS under the 316(b) cooling water intake rule, so why not allow such consultation for greenhouse gas regulations that could have land use impacts with far greater consequence?

**a.** Do you disagree with the Director Ashe of US Fish and Wildlife Service, who said you are obligated to consult with USFWS?

**b.** What arguments have you given to Director Ashe as to why you are not obligated to do so?

**Answer:** The EPA's proposed new source performance standards for emissions of greenhouse gases from new fossil fuel-fired power plants was published in the *Federal Register* on January 8, 2014, and the comment period closed May 9, 2014. Any final rule the agency issues will be science-based, be legally sound, and clearly explain the agency's compliance with the Endangered Species Act while also addressing any comments we receive on that issue.

**Topic: EPA's TSCA Budget**

**Question 42:** The President's FY 2015 Budget justification indicates that the Agency will realign $23 million to focus on several priorities, including implementation of the President's Executive Order on Chemical Safety (E.O. 13650). In a reference to the realignment of funds to address air toxics work, EPA stated the following:

> In the agency's chemical safety program, realignments will be used to develop and release 19 draft chemical risk assessments and complete 10 final chemical risk assessments. These actions are critical in achieving the agency's long-term chemical safety goals.

Are the chemical risk assessments referred to in the Budget proposal the same assessments yet to be completed under the Work Plan Chemical program?

**Answer:** Yes, the 29 chemicals referenced in the question are associated with the TSCA Work Plan chemicals.

**Question 43:** I believe EPA has completed five draft chemical assessments under the Work Plan Chemical program to date.

**a:** When will the first five assessments be made final?

**Answer a:** EPA anticipates making the final risk assessments available this calendar year.

**b:** Do you agree that the Work Plan assessments are a possible model for the Agency's work under a reformed Toxic Substances Control Act?

**Answer b:** The development of risk and other assessments for TSCA Work Plan Chemicals is consistent with the administration's principles to update and strengthen TSCA. These include that chemicals should be assessed against a risk based safety standard and that EPA should have authority to set priorities for conducting safety reviews on existing chemicals based on relevant risk and exposure considerations.

**c:** The Agency reviewed some 1,200 chemicals in prioritizing 83 substances for the Work Plan Chemicals program. Is it your opinion that the Agency has the expertise and capability to prioritize substances in commerce, for further review and assessment, relatively quickly and efficiently?

**Answer c:** Prioritization for the Work Plan chemicals process focused on identifying chemicals which are a high priority for risk assessment. The TSCA Work Plan chemicals were identified following a screening process that was developed after consultation with stakeholders on the criteria and data sources to be used for identifying chemicals for assessment. However, many chemicals could not be screened because useful hazard and/or exposure information on them is lacking.

**d:** The Work Plan Chemical assessments are intended to identify where additional regulation might be necessary with respect to a particular substance. In the first five draft Work Plan chemical assessments, have any additional regulatory needs been identified?

**e:** How does the Agency intend to address those identified needs – what regulatory measures will the Agency take on those substances?

**Answer d and e:** Regulatory actions are based on two distinct elements: risk assessment and risk management. The first five TSCA Work Plan Chemical assessments are risk assessments intended to identify whether there are risks associated with chemical(s) for specific exposure scenarios. A risk assessment does not encompass risk management actions such as regulatory development; rather, its purpose is to inform risk managers about what risk management actions, regulatory or otherwise, may be needed.

The EPA is currently assessing public and peer review comments on the initial draft risk assessments released in FY 2013. EPA will consider the findings contained in those final risk assessments as well as other inputs to determine if risk reduction activities are needed to address potential concerns. This could involve regulatory options, non-regulatory options, or a combination. Again, as noted in the first response, EPA anticipates making the final risk assessments and response to comments documents available this calendar year.